GENERA PLANTARUM

AD EXEMPLARIA IMPRIMIS IN HERBARIIS KEWENSIBUS SERVATA

DEFINITA;

AUCTORIBUS

G. BENTHAM ET J. D. HOOKER.

VOLUMINIS TERTII

PARS I.

SISTENS DICOTYLEDONUM MONOCHLAMYDEARUM ORDINES XXXVI.

NYCTAGINEAS—CERATOPHYLLEAS

ET

GYMNOSPERMEARUM ORDINES III.

GNETACEAS—CYCADACEAS

LONDINI:

VENIT APUD

L. REEVE & CO., 5 HENRIETTA STREET, COVENT GARDEN;

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MDCCCLXXX.

LONDINI
EXCUDERUNT SPOTTISWOODE ET SOC.
NEW-STREET SQUARE

DICOTYLEDONES MONOCHLAMYDEÆ.

Perianthium simplex, lobis segmentisve 1–2-seriatis inter se similibus sæpius calycinis, nunc minutum v. plane nullum. Cætera *Polypetalarum*.

Excepta: Petala vera intra calycem adsunt in *Euphorbiaceis* nonnullis et in uno genere *Phytolaccacearum*.

Perianthium subcorollinum calycis exterioris margine conspicuo in *Loranthaceis* nonnullis, et hinc inde staminodia seu tubi staminei lobi staminibus alterni petala simulant in *Amarantaceis* paucis et in *Batide*.

Excepta minora sub variis ordinibus quærenda.

Monochlamydeæ classem nec naturalem nec bene limitatam formant: Ordines plurimi inter se minime affines sæpe uni alterive inter *Polypetalas* propius accedunt et Botanices plures peritissimi conati sunt eos inter *Polypetalas* distribuere. Parum feliciter tamen succederunt et systema nullum Candolleano revera melius adhuc propositum est. Interea series sequentes hic receptæ potius artificiales ad usum practicum nuncupandæ quam cohortes naturales, etsi ordines in eadem serie conjuncti plerique characteribus essentialibus conveniant.

CONSPECTUS ORDINUM.

(*Exceptis neglectis, de quibus confer* Formas abnormes *sub quoque ordine*).

Series I. Curvembryeæ. Seminum albumen sæpius farinaceum, embryone curvo excentrico laterali v. peripherico, rarius rectiusculo subcentrali et angusto. Ovulum in ovario v. in quoque carpello unicum v. in *Amarantaceis* paucis plura in centro loculi erecta. Flores hermaphroditi v. in paucis generibus unisexuales v. polygami. Petala perrara. Stamina numero perianthii segmentis isomera v. pauciora, rarius plura.

CXXVIII. Nyctagineæ. Perianthii basis persistens, fructum arcte includens eique sæpe adhærens. Stamina hypogyna. Carpellum 1, stylo simplici. Seminis radicula infera v. descendens. Herbæ frutices v. arbores.

CXXIX. Illecebraceæ. Perianthium herbaceum v. margine scariosum, persistens. Stamina perigyna. Ovarium 1-loculare; styli rami v. styli 2–3. Herbæ rarius fruticuli, foliis sæpissime oppositis, stipulis scariosis (v. in *Sclerantheis* 0).

CXXX. Amarantaceæ. Perianthium siccum nec herbaceum, bractea bracteolisque 2 stipatum. Stamina hypogyna v. perigyna filamentis basi connatis. Ovarium 1-loculare; stylus simplex v. 2–3-fidus. Utriculus indehiscens v. irregulariter ruptus v. circumscissus. Herbæ suffruticesve foliis oppositis v. alternis exstipulatis.

CXXXI. CHENOPODIACEÆ. Perianthii lobi v. segmenta membranacea v. herbacea. Stamina hypogyna v. perigyna, filamentis sæpissime liberis. Ovarium 1-loculare, 1-ovulatum; stylus simplex v. 2–3-lobus v. styli 2–5. Utriculus indehiscens. Herbæ v. frutices stipulis 0.

CXXXII. PHYTOLACCACEÆ. Perianthium herbaceum v. coriaceum, rarius membranaceum, in fructu totum persistens v. deciduum. Stamina hypogyna. Carpella sæpius ∞, in annulum approximata v. connata, stylis totidem simplicibus. Seminum radicula infera v. descendens. Arbores v. frutices rarius herbæ basi lignosæ, foliis alternis, stipulis 0 v. parvis.

CXXXIII. BATIDEÆ. Frutex maritimus carnosus, floribus dioicis in strobilis axillaribus. Ovaria 4-locularia, in syncarpium connata, loculis 1-ovulatis.

CXXXIV. POLYGONACEÆ. Perianthium herbaceum membranaceum v. coloratum, rarius basi ovario adhærens. Stamina perigyna. Ovarium 1-loculare, 1-ovulatum, styli ramis v. stylis 2–3. Seminum radicula supera v. ascendens. Herbæ frutices v. arbores. Folia alterna stipulis sæpissime ocreiformibus v. annulum transversum relinquentibus v. rarius opposita linea transversa juncta.

Series II. Multiovulatæ Aquaticæ. Herbæ immersæ. Ovarium syncarpicum, ovulis in quoque loculo v. placenta numerosis.

CXXXV. PODOSTEMACEÆ. Herbæ basi thalliformes v. cauliformes rupibus inundatis adnatæ, foliis v. frondibus bryoideis v. algiformibus. Perianthium parvum tenerum v. 0. Stamina varia. Ovarium superum, loculis placentisve 2–3. Semina exalbuminosa.

Series III. Multiovulatæ Terrestres. Herbæ fruticesve terrestres. Ovarium syncarpicum, ovulis in quoque loculo v. placenta numerosis.

CXXXVI. NEPENTHACEÆ. Suffrutices fruticesve scandentes, foliis alternis in cirrhum ascidiophorum desinentibus. Flores dioici. Ovarium superum. Seminum albumen carnosum.

CXXXVII. CYTINACEÆ. Herbæ parasiticæ, carnosæ, aphyllæ v. squamosæ. Ovarium inferum v. semi-inferum. Seminum albumen 0.

CXXXVIII. ARISTOLOCHIACEÆ. Herbæ rarius frutices interdum scandentes, foliis non cirrhosis. Flores hermaphroditi. Ovarium inferum. Seminum albumen carnosum.

Series IV. Micrembryeæ. Ovarium syncarpicum monocarpicum v. apocarpicum, ovulis in quoque carpello solitariis v. rarius 2 paucisve. Seminum albumen copiosum carnosum v. (in *Piperaceis*) farinaceum; embryo minimus, rarissime (in paucis *Monimiaceis*) major subextrarius.

* *Ovarium syncarpicum, uni- v. pauci-ovulatum, stylis v. stigmatibus 2–4 rarius in stigma pulvinatum coalitis.*

CXXXIX. PIPERACEÆ. Ovarium superum, 1-loculare, 1-ovulatum, v. placentis intrusis imperfecte v. subperfecte 3–4-loculare, pauciovulatum. Herbæ frutices v. rarissime arbores, foliis sæpius alternis. Flores sæpius minimi, spicati v. rarius racemosi, hermaphroditi v. rarius unisexuales. Perianthium rarissime adest.

** *Ovarii carpellum unicum v. plura distincta 1-ovulata, stigmatibus totidem simplicibus sæpius obliquis.*

CXL. CHLORANTHACEÆ. Flores unisexuales. Perianthium 0 v. ovario adnatum. Stamina 1–3. Ovarium inferum v. nudum; ovulum pendulum, orthotropum. Radicula infera. Herbæ frutices v. arbores foliis oppositis.

CXLI. MYRISTICEÆ. Flores unisexuales. Perianthium calycinum, 3-lobum rarius 2- v. 4-lobum. Stamina in fundo perianthii monadelpha. Ovarium in fundo perianthii unicum; ovulum erectum, anatropum. Radicula infera. Arbores foliis alternis.

CXLII. MONIMIACEÆ. Flores hermaphroditi v. unisexuales. Perianthium calycinum, tubo intus disco staminifero vestito dentibus lobisve 2-∞. Stamina ∞. Ovarii carpella

sæpissime ∞, perianthio inclusa; ovula in quoque carpello solitaria, erecta v. pendula, sæpius anatropa. Radicula infera v. supera. Arbores fruticesve foliis oppositis v. rarius alternis.

Series V. Daphnales. Ovarium monocarpicum, rarissime syncarpicum loculis 2–4; ovula in ovario v. in quoque loculo solitaria v. gemina collateralia, rarissime paria pauca superposita. Arbores fruticesve rarissime herbæ floribus sæpius hermaphroditis. Perianthium perfectum sæpius calycinum, lobis 1–2-seriatis. Stamina perigyna, numero loborum æqualia v. dupla nisi hinc inde pauciora.

CXLIII. LAURINEÆ. Perianthii lobi 6 v. 4, 2-seriati. Stamina simplici v. duplici serie lobis opposita, antherarum locellis valva unica sursum v. rarius lateraliter dehiscentibus. Ovarium 1-loculare, ovulo unico pendulo. Radicula supera.

CXLIV. PROTEACEÆ. Perianthii lobi 4, valvati. Stamina totidem, iis opposita; antheræ longitudinaliter dehiscentes. Ovarium 1-loculare; ovula solitaria v. 2 collateralia, v. rarius pauca per paria superposita, ascendentia v. descendentia. Radicula infera v. lateralis.

CXLV. THYMELÆACEÆ. Perianthii lobi 4–5, imbricati. Stamina numero loborum æqualia v. pauciora iisque opposita v. dupla, rarissime tripla; antheræ normales. Ovarium 1–2-loculare; ovula in quoque loculo solitaria, pendula. Radicula supera.

CXLVI. PENÆACEÆ. Perianthii lobi 4, valvati. Stamina totidem, lobis alterna; antheræ normales. Ovarium 4-loculare, ovula in quoque loculo 2 v. 4, erecta v. pendula. Radicula infera v. supera.

CXLVII. ELÆAGNACEÆ. Perianthium supra ovarium constrictum, basi persistens, superne deciduum, lobis 2 v. 4. Stamina numero loborum dupla, iis alterna et opposita. Ovarium 1-loculare; ovulum unicum, erectum. Radicula infera.

Series VI. Achlamydosporeæ. Ovarium uniloculare, 1–3-ovulatum, loculo ovulisque sæpe ante anthesin inconspicuis. Seminis albumen testa destitutum, intra pericarpium nudum v. parietibus pericarpii adnatum. Perianthium sæpius perfectum, calycinum corollinum v. in *Loranthо* subduplex.

CXLVIII. LORANTHACEÆ. Frutices suffruticesve in arboribus sæpissime parasitici. Ovarium inferum; ovulum post anthesin erectum. Radicula supera.

CXLIX. SANTALACEÆ. Arbores frutices v. rarius herbæ terrestres v. rarius parasiticæ. Ovarium inferum rarius superum; ovula 1–3, ab apice funiculi centralis liberi erectique pendula, (rarius ovulum 1 erectum?). Radicula supera.

CL. BALANOPHOREÆ. Herbæ carnosæ, squamosæ, aphyllæ, in radicibus parasiticæ.

Series VII. Unisexuales. Flores stricte unisexuales (exceptis perpaucis *Urticaceis* polygamis). Ovarium syncarpicum v. monocarpicum, ovulis in ovario v. in quoque loculo solitariis v. 2 collateralibus. Seminum albumen copiosum carnosum v. tenue v. 0. Embryo albumine vix v. parum brevior v. semen totum implens. Arbores fruticesve v. in *Euphorbiaceis Urticaceis*que interdum herbæ. Stipulæ sæpius adsunt. Perianthium calycinum v. minimum v. 0; petala interdum in *Euphorbiaceis* solis adsunt. Styli tot quot carpella sed haud raro 2-partiti.

CLI. EUPHORBIACEÆ. Inflorescentia perianthium et stamina quam maxime varia. Ovarium 2–3- rarius ∞-loculare, rarissime monocarpicum. Fructus sæpius in coccos 2-valves dissiliens, sed interdum indehiscens carnosus v. varius. Seminis albumen sæpius copiosum carnosum, sed interdum tenue v. 0; radicula semper supera.

CLII. BALANOPSEÆ. Inflorescentia ♂ amentacea. Perianthium 0 v. squamula minuta. Stamina 2–∞, antheris subsessilibus. Ovarium imperfecte 2-loculare. Ovula in loculis 2, erecta, anatropa. Fructus indehiscens. Seminis albumen copiosum, carnosum; radicula infera.

CLIII. URTICACEÆ. Inflorescentia ♂ cymosa [illegible] [illegible]malis confertis amentiformis. Perianthium ♂ a bractea liberum, staminib[illegible] abortu paucioribus

rarissime pluribus. Ovarium 1-loculare, 1-ovulatum. Seminis albumen tenue v. 0, rarius copiosum carnosum. Radicula supera.

CLIV. Platanaceæ. Flores utriusque sexus globoso-capitati. Perianthium 0. Stamina in capitulis ♂, ovaria in ♀, in receptaculo centrali densissime conferta, bracteis paucis v. in ♂ 0 interstinctis. Ovarium 1-loculare, 1-ovulatum. Albumen tenue. Radicula infera.

CLV. Leitnerieæ. Inflorescentia ♂ amentacea. Perianthium 0. Stamina ∞, bracteæ affixa. Ovarium 1-loculare, 1-ovulatum. Albumen tenue. Radicula supera. Folia simplicia.

CLVI. Juglandeæ. Inflorescentia ♂ amentacea. Perianthium bracteæ accretum v. 0. Stamina ∞, bracteæ affixa. Ovarium 1-loculare, 1-ovulatum. Semen basi 2–4-lobum. Albumen 0. Radicula supera. Folia pinnata.

CLVII. Myricaceæ. Inflorescentia ♂ spicata subamentacea. Perianthium 0. Stamina 2-∞, basi bracteæ affixa. Ovarium 1-loculare, 1-ovulatum. Semen integrum. Albumen 0. Radicula supera. Folia simplicia.

CLVIII. Casuarineæ. Inflorescentia ♂ spicata. Perianthii segmenta 1–2, minuta. Stamen 1. Ovarium 1-loculare, 2-ovulatum. Semen unicum. Albumen 0. Radicula supera. Rami aphylli, articulati. Squamulæ angulos articulorum terminantes per 4–∞ verticillatæ.

CLIX. Cupuliferæ. Inflorescentia ♂ sæpius amentacea. Perianthium parvum v. 0. Stamina varia. Ovarium inferum v. nudum 2–3- (rarius 4–6-) loculare, loculis 2-ovulatis. Albumen 0. Radicula supera. Folia simplicia.

Series VIII. Ordines anomali, *Unisexualibus* subaffines, sed nec inter se nec ulli alii ordini bene conjuncti. Flores sæpe stricte unisexuales sed in *Empetro* polygami, in *Lacistemate* hermaphroditi et e cæteris characteribus unus alterve ab ordinibus præcedentibus discrepat.

CLX. Salicineæ. Inflorescentiæ amentaceæ unisexuales. Perianthium (v. discus) e squamis glanduliformibus v. cupulatum. Stamina 2–∞. Ovarium 1-loculare, placentis 2–4 ∞-ovulatis. Capsula 2–4-valvis. Semina minima longe comosa. Albumen 0. Radicula infera. Arbores fruticesve.

CLXI. Lacistemaceæ. Inflorescentia tenuiter spicata. Flores hermaphroditi. Perianthium 0 v. e squamulis distinctis. Stamen 1. Ovarium superum, 1-loculare, placentis 2–3 1–2-ovulatis. Capsula 2–3-valvis, 1-sperma. Albumen carnosum. Radicula supera. Frutices v. arbusculæ.

CLXII. Empetraceæ. Flores sæpius unisexuales, axillares v. rarius in capitulo terminali. Perianthii segmenta 4–6, sub-2-seriata. Stamina 2–3. Drupa 2–∞-pyrena, pyrenis 1-spermis. Albumen carnosum. Radicula infera. Fruticuli ericoidei v. prostrati.

CLXIII. Ceratophylleæ. Flores unisexuales, axillares. Perianthium submembranaceum, ∞-partitum. Stamina ∞. Ovarium 1-loculare, 1-ovulatum. Nux sæpius 2–4-spinosa. Albumen 0. Radicula supera; plumula jam in semine ∞-phylla. Herbæ aquaticæ immersæ, foliis verticillatis dichotomis.

GYMNOSPERMEÆ.

Flores stricte unisexuales. Perianthium 0 v. in *Gnetaceis* anomalum. Ovarium et stylus 0, ovulis nudis, nucleo ipso vertice pollen recipiente. Cotyledones 2, v. interdum 3–∞.

Gymnospermeæ, olim in *Monochlamydeis* inclusæ, hodie ab omnibus botanicis pro subclasse *Dicotyledonum* v. pro classe distincta recipiuntur. Quoad florum homologiam difficillime cum cæteris *Dicotyledonibus* comparantur, nec ullo genere intermedio connectuntur. A *Monocotyledonibus* adhuc remotiores videntur, affinitates potius cum formis nonnullis antiquis *Cryptogamarum* quærendæ.

CONSPECTUS ORDINUM.

CLXIV. Gnetaceæ. Fruticum rami v. pedunculi e trunco lignoso articulati v. nodosi, squamis foliisve oppositis indivisis. Florum spicæ amentiformes v. interruptæ. Perianthium ♂ membranaceum 2-lobum, ♀ utriculosum. Staminum columna 1–8-antherifera.

CLXV. Coniferæ. Arbores fruticesve. Folia indivisa, ad squamas reducta v. acicularia, rarius explanata. Flores ♂ amentiformis, antheris 2–∞-locellatis (amenti squamæ 2–∞-antheriferæ *auct. plur.*). Flores ♀ in amentum v. strobilum conferti, rarius solitarii, ovulis ad quamque squamam 1–∞.

CLXVI. Cycadaceæ. Folia ad apicem caudicis lignosi conferta, ampla, pinnatisecta. Flores utriusque sexus strobilacei, ♂ antherarum loculis ad quamque squamam numerosis, ♀ ovulis ad quamque squamam 2–∞.

DICOTYLEDONES.

MONOCHLAMYDEÆ.

ORDO CXXVIII. **NYCTAGINEÆ.**

Endl. Gen. 310. Lindl. Veg. Kingd. 506. Baill. Hist. Pl. iv. 1.

Flores hermaphroditi, rarius unisexuales, regulares. *Perianthium* inferum, herbaceum v. corollinum, sæpius campanulatum hypocrateriforme v. infundibulare, fructu persistens et sæpissime accrescens, pericarpium arcte includens; tubus brevis v. elongatus, interdum longissimus, basi sæpius incrassatus v. induratus, fauce constricta v. aperta; limbus persistens v. deciduus, truncatus v. 3–5-dentatus v. -lobatus, lobis dentibusve sæpissime plicato-valvatis, sinubus membranaceis et post anthesin involutis, rarius simpliciter valvatis et post anthesin rectis. *Stamina* 1–∞, hypogyna; filamenta libera v. basi in annulum connata, rarissime tubo perianthii cohærentia, inæquilonga, filiformia v. capillaria, in alabastro circinnatim involuta, rarissime unilateralia. *Antheræ* inclusæ v. exsertæ, dorso prope basin affixæ, didymæ, loculis rimis lateralibus dehiscentibus, rarius elongatæ loculo altero interdum altius inserto; pollen simplex. *Ovarium* tubo perianthii inclusum, sessile v. stipitatum, sæpius plus minusve elongatum, 1-loculare, membranaceum, apice sæpissime attenuato. *Stylus* brevis v. elongatus, filiformis v. capillaris v. 0: stigma parvum, simplex, capitellatum peltatum v. fimbriatum, v. e cruribus capillaribus, rarius laterale v. stylus uno lateri stigmatosus. *Ovulum* basilare, erectum, campylotropum, funiculo brevi. *Fructus* (*anthocarpium* dictus) e perianthii basi persistente coriacea carnosa v. indurata utriculum indehiscentem includente eique adhærente constans, costatus sulcatus v. alatus, humectatus mucilaginosus v. immutatus, v. angulis viscum exsudantibus, v. seriebus glandularum stipitatarum ornatus; utriculi pericarpium membranaceum tenuiter coriaceum v. carnosum. *Semen* erectum; testa hyalina v. cum pericarpio omnino coadunata; albumen parcum v. sat copiosum, farinaceum carnosum v. mucosum, interdum fere evanidum. *Embryo* nunc rectus, cotyledonibus latis foliaceis conduplicatis albumen longitudinaliter involvens, radicula brevi infera, nunc incurvus, cotyledonibus incumbentibus latis foliaceis convolutis albumen involventibus, v. cotyledonibus angustis albumini applicitis, radicula elongata extraria infera.

Herbæ, rarius frutices v. arbores, cortice non raro spongioso, di-tri-chotome ramosæ, tela cellulari raphidiis onusta. Folia opposita et alterna, sessilia v. petiolata, simplicia, integerrima, penninervia. Stipulæ 0. Flores interdum dimorphi, v. jam in alabastro fœcundati, sæpissime in cymas paniculatas v. corymbosas terminales et axillares dispositi, rarissime solitarii v. racemosi; non raro umbellulati v. capitati; sæpe involucro calyciformi. Involucrum calyciforme e bracteis connatis v. liberis, flores 1–∞ sæpe cingens, persistens v. deciduum, post anthesin immutatum v. accrescens, nunc explanatum coloratum et reticulato-venosum; bracteis in floribus exinvolucratis 0, v. 1–3 minutis. Perianthium parvum v. minutum v. rarius majusculum, obscurum v. coloratum. Fructus varius.

Species ad 215, regionum tropicarum et calidiorum totius orbis imprimis Americæ incolæ, in Australia rariores, in Africa *Boerhaavia* excepta rarissimæ.

Ordo nulli arcte affinis, sed evidenter juxta *Phytolaccaceas* bene collocatus: habitu, æstivatione, absentia stipularum, stylo simplici, et indole embryonis sat diversus.

FORMÆ ABNORMES.

Flores racemosi in *Senkenbergia*.

Stamina tubo perianthii cohærentia in *Abronia*: antheræ magnæ introrsum dehiscentes in *Leucastere*.

Perianthium simpliciter valvatum in *Boldoa*, *Collignonia* et ? in *Andradea*.

Stigma sessile, vertice ovarii longitudinaliter obductum in *Reichenbachia*.

Embryo fere annularis in *Cryptocarpo*; cotyledon unica in *Abronia*.

CONSPECTUS GENERUM.

Tribus I. Mirabilieæ. Utriculus basi perianthii accrescentis apice clausi inclusus. Embryo uncinatus; cotyledones latæ et convolutæ v. angustæ et planæ; radicula elongata, descendens, extraria.

Subtribus 1. Boerhaavieæ. *Perianthii limbus plicatus. Stamina hypogyna, sæpius exserta; antheræ didymæ. Stigma capitellatum. Cotyledones latæ. Folia opposita.*

* *Flores involucrati, bracteis connatis.*

1. Mirabilis. Perianthium elongatum, rarius campanulatum. Involucrum post anthesin immutatum.—*Amer. occid.*

2. Oxybaphus. Perianthium breve, campanulatum v. infundibulare. Involucrum post anthesin sæpius accrescens, rotato-campanulatum, venosum.—*Amer. occid., Himalaya.*

** *Flores involucrati, bracteis liberis.*

3. Nyctaginia. Involucrum polyphyllum, multiflorum. Stamina 5. Anthocarpium turbinatum, multicostatum.—*Texas.*

4. Allionia. Involucrum 3-phyllum, 3-florum. Stamina 4. Anthocarpium hinc profunde sulcatum, marginibus incurvis spinoso-dentatis.—*Amer. bor. occid.*

*** *Flores exinvolucrati, bracteolati (in Boerhaaviis paucis involucellati).*

5. Boerhaavia. Flores paniculati v. umbellati. Stamina 1–5. Anthocarpium teres, costatum v. 5-gonum.—*Utriusque orbis reg. trop.*

6. Senkenbergia. Flores racemosi. Stamina 3–5. Anthocarpium costatum v. gibbosum. —*Mexico.*

7. Acleisanthes. Flores capitati. Stamina 2–5. Anthocarpium costatum.—*Texas, Nov. Mex.*

8. Selinocarpus. Flores 1–3. Stamina 2–5. Anthocarpium late alatum.—*Nov. Mex.*

9. Okenia. Flores solitarii. Stamina 15–18. Anthocarpium costatum.—*Mexico.*

**** *Flores exinvolucrati, costis bractearum foliacearum imbricatarum singulatim inserti.*

10. Hermidium.—*Amer. bor. (Nevada).*

Subtribus 2. Bougainvilleæ. *Flores exinvolucrati, costis bractearum inserti. Perianthii limbus plicatus. Stamina hypogyna, inclusa v. exserta; antheræ didymæ. Stigma laterale. Cotyledones convolutæ. Frutices foliis alternis.*

11. Bougainvillea. Bracteæ 3, omnes floriferæ, sub anthesin amplæ.—*Amer. merid.*

12. Tricycla. Bracteæ 3, una florifera, sub anthesin parvæ, demum ampliatæ.—*Chili.*

Subtribus 3. Abronieæ. *Flores involucrati. Perianthii limbus plicatus. Stamina inclusa, filamentis tubo perianthii cohærentibus; antheræ lineari-oblongæ. Stigma lineare. Cotyledones latæ, convolutæ.—Herbæ foliis oppositis.*

13. Abronia. Flores receptaculo communi inserti. Stamina 5. Anthocarpium costatum v. alatum.—*Amer. bor. occ.*

Subtribus 4. Boldoeæ. *Flores exinvolucrati v. involucrati. Perianthii limbus valvatus. Stamina hypogyna, filamentis liberis; antheræ didymæ. Cotyledones planæ v. conduplicatæ.—Herbæ v. frutices.*

14. Boldoa. Flores exinvolucrati. Stamina 3–4. Ovarium sessile; stylus filiformis, stigmate acuto. Cotyledones planæ.—*Mexico, Cuba.*

15. Collignonia. Flores umbellulati, involucrati. Stamina 5. Ovarium stipitatum; stylus filiformis, stigmate glanduloso v. fimbriato. Cotyledones planæ.—*Andes.*

16. Reichenbachia. Flores fasciculati, exinvolucrati. Stamina 2–3. Ovarium subsessile, stigmate sessili. Cotyledones conduplicatæ.—*Paraguay.*

Tribus II. Pisonieæ. Utriculus elongatus, perianthii tubo accrescente apice clauso inclusus. Embryo rectus; cotyledones latæ, convolutæ; radicula brevis.

17. Pisonia. Stamina 6–10, exserta. Stigma terminale.—*Utriusque orbis reg. trop.*

18. Neea. Stamina 5–10, inclusa. Stigma terminale.—*Amer. merid.*

19. Timeroya. Stamina ad 30, inclusa. Stigma laterale. Flores hermaphroditi.—*Nov. Caledon.*

20. Cephalotomandra. Stigma laterale. Flores dioici.—*Nov. Grenada.*

Tribus III. Leucastereæ. Achænium subglobosum, basi perianthii inclusum, liberum. Embryo brevis, curvus v. annularis. Arbores v. frutices foliis alternis.

21. Leucaster. Stamina 2, inclusa, filamentis brevibus; antheræ magnæ, latæ. Stigma sessile, elongatum.—*Brasil.*

22? Andradea. Stamina 12–20, exserta, filamentis elongatis; antheræ lineares. Stylus sigmoideus.—*Brasil.*

23. Cryptocarpus. Stamina 5, inclusa; antheræ didymæ. Stylus subterminalis.—*Amer. trop.*

GENERA EXCLUSA.

Epilithes, Blume est *Serpicula* inter **Halorageas**, supra, i. 675.

Torreya, Spreng., est *Clerodendri* species inter **Verbenaceas**, supra, ii. 1156.

Achatocarpus, Triana, est **Amarantacea.**

Tribus I. Mirabilieæ.

1. **Mirabilis,** *Linn. Gen. n.* 242. (Nyctago, *Juss. Gen.* 90. Jalapa, *Moench, Meth.* 508.)—Involucrum 1-∞-florum, calyciforme, 5-lobum, lobis erectis acuminatis imbricatis, post anthesin non ampliatum. Perianthii tubus elongatus, supra ovarium constrictus; limbus explanatus, 5-lobus, plicatus, deciduus. Stamina 5–6, inæquilonga, exserta, filamentis capillaribus circinnatim incurvis, ima basi in cyathum carnosulum connatis; antheræ didymæ. Ovarium ellipsoideum v. ovoideum; stylus filiformis, exsertus, stigmate capitellato papillis stipitatis onusto. Anthocarpium chartaceum crustaceum v. coriaceum, costatum, glabrum v. pubescens. Utriculus obovoideus, coriaceus. Seminis testa pericarpio adhærens; embryo uncinatus, cotyledonibus albumen parcum farinaceum involventibus, radicula elongata descendente extraria.—Herbæ di-trichotome ramosæ, glabræ v. glanduloso-pubescentes, radice elongata v. tuberosa. Folia opposita, inferiora petiolata, superiora sessilia. Involucra in cymas ramosas sæpe densas disposita. Flores majusculi, fragrantes v. inodori, albi coccinei v. versicolores.

Species ad 10, Americæ calidioris incolæ.

Genus in sectiones 2 dividitur:—

1. *Eumirabilis.* Involucrum 1-florum. Perianthii tubus valde elongatus, limbus latiusculus. Mirabilis, *Chois. in DC. Prod.* xiii. ii. 427. *Baill. Hist. Pl.* iv. 1, *fig.* 1–10. *Gaertn. Fruct.* ii. 207, *t.* 127. *Lam. Ill. t.* 105. *Sm. Exot. Bot.* i. *t.* 23. *Spach, Suites Buff. t.* 146 (*Nyctago*). *Bertol. in Nov. Comm. Bonon.* iii. *t.* 1. *Torr. Bot. Emory Exped. t.* 48. *Bot. Mag. t.* 371 (*Nyctago*). *J. A. Schmidt in Mart. Fl. Bras.* xiv. ii. *t.* 81.

2 *Quamoclidion.* Involucrum 3-∞-florum. Perianthii tubus cylindraceus; limbus parvus. Hic includuntur: *M. multiflora*, Gray (*Nyctaginia? Torreyana*, Chois.); *M. triflora*, Benth. (Quamoclidion, *Chois. in DC. Prod.* xiii. ii. 429); *M. coccinea* (*Oxybaphus*, Torr. Bot. Emory Exped. 169); et *M. Greenii*, S. Wats. Bot, Calif. ii. 2, ined.

2. **Oxybaphus**, *Vahl, Enum.* ii. 39. (Allionia, *Loefl. It.* 181, *non Linn. Gen.* Calyxhymenia, *Orteg. Dec.* 5, t. 1. Calymenia, *Pers. Syn.* i. 36. Vitmania, *Turra ex Cav. Ic.* iii. *Addend.*)—Involucrum 1–3-florum, æqualiter v. inæqualiter 5-fidum v. -lobum, post anthesin plus minus auctum, nunc rotato-explanatum et reticulato-venosum, lobis imbricatis v. plicato-valvatis. Perianthium campanulatum v. infundibulare, sæpius obliquum, tubo brevi supra ovarium constricto; limbus plicatus, brevis, explanatus v. suberectus, deciduus. Stamina 2–5, sæpius 3, inæquilonga, inclusa v. exserta, filamentis capillaribus circinnatim incurvis, ima basi in urceolum connatis; antheræ didymæ. Ovarium ovoideum v. subglobosum; stylus filiformis, stigmate capitellato papillis stipitatis onusto. Anthocarpium parvum, oblongum fusiforme v. obovoideum, teres v. costatum, læve rugosum v. tuberculatum, glabrum v. pilosum, humectatum mucilaginosum. Utriculus obovoideus. Seminis testa pericarpio adhærens; embryo uncinatus, cotyledonibus albumen parcum farinaceum involventibus, radicula elongata descendente extraria.—Herbæ erectæ v. prostratæ, dichotome ramosæ, glanduloso-pilosæ v. fere glabræ. Folia opposita, sessilia v. petiolata. Involucra oblonga v. cyathiformia, cymosa v. paniculata, rarius axillaria et solitaria. Flores inter minores, albi rosei v. coccinei. Fructus parvulus.

Species ad 20, Americæ occidentalis tam borealis quam australis incolæ, paucæ Americæ boreali civitatibus orientalibus indigenæ, una Himalaica.—*Chois. in DC. Prodr.* xiii. ii. 430. *Griseb. Pl. Lorentz.* 38. *A. Gray in Bot. Emory Exped.* 173. *Ruiz et Pav. Fl. Per. et Chil. t.* 75 (*Calyxhymenia*). *Cav. Ic.* i. *t.* 19, iv. *t.* 379 *et* 437 (*Mirabilis*). Genus a *Mirabili* ægre distinguendum, in sectiones 2 admodum naturales dividitur:—

1. Involucrum 1–3-florum, campanulatum v. rotato-explanatum, post anthesin auctum, demum membranaceum, reticulatum; anthocarpium costatum v. grosse tuberculatum v. rugosum, glabrum v. pilosum, rarius læve. Includit *O. viscosum*, L'Hér. (*Bot. Mag. t.* 434), speciem involucro post anthesin primum valvatim clauso demum explanato, aliasque involucro post anthesin simpliciter expanso. In *O. Cervantesii*, Lag. (*Sweet, Brit. Fl. Gard. ser.* 1, i. *t.* 84), planta hortis Europeis tantum cognita, involucrum post anthesin parum ampliatum, uti anthocarpium læve glabrum. Huc quoque pertinet *Quamoclidion oxybaphoides*, A. Gray in Amer. Journ. Sc. ser. 2, xv. 320; involucro 4–5-fido, lobis inæqualibus et anthocarpio globoso apiculato lævi.

2. Involucrum 1-florum, post anthesin immutatum v. parum ampliatum; anthocarpium ecostatum, læve, glabrum. Includit *O. cordifolium* Kunze, *O. micranthum* Chois., *O. californicum* (*Mirabilis*, A. Gr.), *O. himalaicum* Edgw., aliasque austro-americanas.

Calyxhymenia est nomen vitiosum, a Persoonio in *Calymeniam* mutatum, sed genus jam prius a Vahlio, duce Heritiero, *Oxybaphum* dictum, nomen hodie ab auctoribus omnibus acceptum.

3. **Nyctaginia**, *Chois. in Mém. Soc. Phys. Gen.* xii. 167, *t.* 1, *et in DC. Prod.* xiii. ii. 429. —Involucrum polyphyllum, multiflorum, bracteis lanceolatis inæqualibus post anthesin immutatis. Perianthii tubus elongatus, gracilis, supra ovarium constrictus; limbus infundibularis, late 5-lobus, plicatus, deciduus. Stamina 5, filamentis capillaribus inæquilongis pilosis longe exsertis ima basi dilatatis et infra basin ovarii connatis; antheræ didymæ. Ovarium ovoideum; stylus capillaris, exsertus, stigmate minuto capitato papillis stipitatis onusto. Anthocarpium crasse coriaceum, turbinatum, supra basin constrictum, vertice late umbonatum, multi costatum, humectatum mucosum. Utriculus obovoideus, pallidus, apiculatus. Seminis testa pericarpio membranaceo adhærens; embryo uncinatus, cotyledonibus latissime obcordatis albumen farinaceum involventibus, radicula elongata descendente extraria.—Herba annua, prostrata, dichotome ramosa, glanduloso-hirsuta. Folia opposita, petiolata, hastato-ovata, sinuato-lobata. Involucra axillaria et terminalia, longiuscule pedunculata. Flores pollicares, rosei, involucri foliola longe superantes, molliter pilosi.

Species 1, Texana.

4. **Allionia**, *Linn. Gen. n.* 117, *non Loefl.* (Wedelia, *Linn. in Loefl. It.* 180.)—involucrum 3-phyllum, 3-florum, bracteis inæqualibus v. subæqualibus fructiferis erectis. Perianthium membranaceum, infundibulare, tubo basi compresso supra ovarium con-

stricto; limbus inæqualiter 4-lobus, patens, plicatus. Stamina 4, hypogyna, exserta, filamentis capillaribus; antheræ didymæ. Ovarium ovoideum; stylus filiformis, stigmate capitellato papillis stipitatis onusto. Anthocarpium crasse coriaceum, obovoideum v. ellipsoideum, antice teres v. trigonum, dorso profunde sulcatum, marginibus inflexis spinulosis, sulco 2-carinato. Seminis testa pericarpio adhærens; embryo uncinatus, cotyledonibus latis albumen involventibus, radicula elongata descendente extraria.—Herbæ prostratæ, dichotome ramosæ, pubescentes v. pilosæ. Folia opposita, paribus inæqualibus, petiolata, basi inæqualia, acuta v. obtusa, integerrima, plana v. marginibus undulatis. Involucra axillaria, pedicellata, solitaria. Flores parvi, purpurei.

Species 1, regionum arenosarum calidiorum Americæ occidentalis tam borealis quam australis incola.—*Chois. in DC. Prod.* xiii. ii. 434. *S. Wats. Bot. Calif.* ii. 3, *ined.* *Gærtn. f. Fruct.* iii. 182, *t.* 214. *Lam. Ill. t.* 58. *L'Hér. Stirp. t.* 31.

5. **Boerhaavia,** *Linn. Gen. n.* 9 (Boerhavia).—Flores bracteolati, bracteolis minutis rarissime verticillatis et involucellum formantibus. Perianthii tubus brevis v. longiusculus, basi ovoideus, supra ovarium constrictus; limbus infundibularis, margine 5-lobus, lobis patentibus plicatis, deciduus. Stamina 1–5, exserta, filamentis capillaribus inæquilongis basi connatis; antheræ didymæ. Ovarium stipitatum, obliquum, in stylum capillarem attenuatum, stigmate peltato. Anthocarpium obovoideum turbinatum v. clavatum, obtusum v. truncatum, teres 5-costatum v. alte 5-gonum faciebus depressis, minute v. grosse glandulosum, humectatum mucosum. Utriculus oblongus. Seminis testa pericarpio adhærens; embryo uncinatus, cotyledonibus tenuibus latis albumen parcum involventibus exteriore majore, radicula descendente elongata extraria.—Herbæ erectæ v. diffusæ, basi lignosæ, glabræ glandulosæ v. pubescentes, ramis sæpius divaricatis. Folia opposita, subsessilia v. petiolata, paribus non raro inæqualibus, integerrima v. sinuata, crassiuscula. Flores parvi v. minuti, paniculati umbellati v. capitellati, sessiles v. pedicellati, pedicello cum flore articulato, bracteolis sæpe deciduis. Anthocarpium parvum, sæpe grosse glandulosum.

Species ad 30, sed paucæ inordinate multiplicatæ, per regiones calidiores late dispersæ.—*Chois. in DC. Prod.* xiii. ii. 449. *Walp. Ann.* iii. 298, v. 722. *Gærtn. Fruct.* ii. 208, *t.* 127. *Miq. Fl. Ind. Bat.* i. 991. *A. Gray in Amer. Journ. Sc. ser.* 2, xv. 321. *Benth. Fl. Austral.* v. 277. *Griseb. Fl. Brit. W. Ind.* 69. *Dalz. et Gibs. Bomb. Fl.* 213. *Griseb. Pl. Lorentz.* 40. *Jacq. Hort. Vind.* i. *t.* 4 *ad* 7; *Obs. t.* 84; *Fragm. t.* 46. *Cav. Ic. t.* 112. *Delile, Fl. Eg. t.* 3. *Wight Ic. t.* 874, 875, 1766. *F. Muell. Pl. Vict.* ii. *t.* 67. *Kotschy, Pl. Tinn. t.* 18. *J. A. Schmidt in Mart. Fl. Bras.* xiv. ii. *t.* 86.

6. **Senkenbergia,** *Schauer in Linnæa*, xix. 711. (Tinantia, *Mart. et Gal. in Bull. Acad. Brux.* xi. i. 240, *non Scheidw.* Lindenia, *Mart. et Gal. l.c.* x. ii. 357, *non Benth.*).—Flores spicati v. racemosi, bracteolati, bracteolis deciduis minutis. Perianthium membranaceum, infundibulare, tubo basi recto v. curvo supra ovarium constricto; limbus 5-lobus, plicatus. Stamina 3–5, exserta, filamentis capillaribus inæqualibus ima basi connatis; antheræ didymæ. Ovarium ovoideum; stylus capillaris, stigmate capitato lobulato. Anthocarpium v. erectum et ellipsoideum, v. clavatum et 5-costatum, v. pendulum et subcylindraceum latere gibbum. Utriculus stipitatus, obovoideus v. clavatus, membranaceus. Seminis testa pericarpio adhærens; embryo uncinatus, cotyledonibus latis tenuibus albumen farinaceum involventibus, interiore multo minore, radicula elongata descendente extraria. —Herbæ graciles, erectæ, basi sublignosæ, glabræ v. pubescentes, ramulis superne viscidulis. Folia opposita, petiolata, ovata v. hastato-ovata, integerrima v. sinuata. Flores parvi, in racemos spicasve terminales dispositi, albi v. rosei.

Species 4, Mexici borealis incolæ. *Chois. in DC. Prod.* xiii. ii. 457 (*Tinantia*). *A. Gray in Amer. Journ. Sc. ser.* 2, xv. 323 (*Boerhaaviæ sect.*).

Genus in sectiones 2 facile divisum.

1. Perianthium basi elongatum, curvum; anthocarpium pendulum, cylindraceo-clavatum, curvum, uno latere gibbum, vertice truncato 5-gibboso. *S. gypsophiloides* (*Tinantia*, Chois.).

2. Perianthium basi breviter ovoideum; anthocarpium erectum, clavatum v. ellipsoideum, crasse 5-costatum. Huc pertinent: *Boerhaavia erecta*, Chois., an Torr.? in Bot. Emory Exped. 171, anthocarpiis ellipsoideis, et species nova, *S. Coulteri*, Hook. f., anthocarpio clavato truncato.

7. **Acleisanthes**, *A. Gray in Amer. Journ. Sc. ser.* 2, xv. 259.—Flores subsolitarii, minute bracteolati. Perianthii tubus elongatus, ima basi ovoideus, inflatus, supra ovarium constrictus; limbus infundibularis, 5-lobus, plicatus. Stamina 2–5, filamentis filiformibus inæquilongis basi in cupulam connatis; antheræ didymæ, exsertæ. Ovarium ovoideum; stylus filiformis, exsertus, stigmate minuto peltato lævi. Anthocarpium oblongo-cylindraceum, truncatum, sub apice constrictum, 5-gonum v. 5-costatum costis crassis suberosis lævibus, humectatum mucosum. Utriculus oblongus, pericarpio tenui lævi. Seminis testa pericarpio adhærens; embryo incurvus, cotyledonibus latis tenuibus albumen farinaceum involventibus, exteriore majore, radicula elongata descendente extraria.—Fruticuli v. herbæ, suberecti v. diffusi, dichotome ramosi, cano-pubescentes v. glabrescentes. Folia opposita, petiolata, paribus interdum inæqualibus, integerrima, nunc crassiuscula. Flores terminales et axillares, sæpius solitarii, albidi, puberuli v. glabri.

Species 6, Texanæ et Novo-Mexicanæ. *Torr. Bot. Emory Exped.* 170, *t.* 46.

Genus a Baillonio Hist. Pl. iv. 4, ad sectionem *Mirabilis* reducitur. PENTACROPHYS, *A. Gray in Amer. Journ. Sc. ser.* 2. xv. 261, *et Torr. Bot. Emory Exped.* 170, *t.* 47 B, nobis videtur *Acleisanthis* species anthocarpiis dimorphis, quorum alia tuberculis 5 crassis costas terminantibus umbonata, alia glandulis minoribus demissius positis instructa. Stamina 2 ex descriptione Grayo et e flore unico a nobis scrutato, 4 in icone Torreyi.

8. **Selinocarpus**, *A. Gray in Amer. Journ. Sc. ser.* 2, xv. 262.—Flores 1–3-bracteolati. Perianthium infundibulare v. cyathiforme, tubo brevi v. elongato basi compresso vix inflato supra ovarium constricto; limbus breviter 5-lobus, lobis plicatis. Stamina 2, 3, v. 5, filamentis filiformibus inæquilongis, ima basi in cupulam connatis; antheræ didymæ, exsertæ. Ovarium ovoideum; stylus capillaris, exsertus, stigmate minuto peltato lævi. Anthocarpium compressum, late 3–5-alatum, nucleo coriaceo angusto humectato submucoso valide costato, alis membranaceis hyalinis enerviis. Utriculus membranaceus, lævis. Seminis testa pericarpio adhærens; embryo conduplicatus, cotyledonibus amplis albumen farinaceum involventibus, radicula elongata descendente extraria.—Herbæ multicaules, basi lignosæ, dichotome ramosæ, cano-pubescentes. Folia opposita paribus inæqualibus, petiolata, integerrima v. marginibus sinuatis. Flores breves v. elongati, terminales v. axillares, sæpe præcoces.

Species 3, Novo-Mexicanæ. *Torr. Bot. Emory Exped.* 170, *t.* 47.

9. **Okenia**, *Cham. et Schlecht. in Linnæa*, v. 92.—Flores solitarii, 3-bracteolati. Perianthium infundibulare, tubo gracili basi æquali supra ovarium constricto; limbus 5-lobus, lobis emarginatis plicatis post anthesin involutis. Stamina 15-18, filamentis capillaribus inæquilongis ima basi in cupulam connatis; antheræ didymæ. Ovarium oblongum; stylus filiformis, stigmate capitato lævi exserto. Anthocarpium suberosum, oblongum, basi paullo attenuatum et curvatum, 10-costatum, interstitiis transverse plicatis, endocarpio fragili. Utriculus oblongus, basi acutus, pericarpio tenui. Embryo conduplicatus, cotyledonibus magnis obovatis albumen farinaceum involventibus, radicula elongata descendente extraria.—Herba prostrata, glutinoso-tomentosa. Folia opposita, paribus inæqualibus, petiolata, integerrima. Pedunculi axillares, solitarii, 1-flori, primum breves, post anthesin elongati et terram intrantes ad fructum maturandum. Perianthium pollicare, tenerum, purpureum, extus glutinosum.

Species 1, in arenosis prope Vera Cruz, Mexici vigens.—*Chois. in DC. Prodr.* xiii. ii. 449. Fructus a nobis non visus.

10. **Hermidium**, *S. Wats. Bot.* 40 *Parall.* 286 *t.* 32, *et Bot. Calif.* ii. 6, *ined.*—Flores exinvolucrati, bracteati, costis bractearum singulatim inserti, bracteis ad 6 foliaceis amplis laxe imbricatis ovato-cordatis membranaceis. Perianthium subcampanulatum,

obscure 5-lobum, plicatum, nervis sinubus descendentibus, basi globosum, supra ovarium constrictum. Stamina 5–7, filamentis inæqualibus capillaribus basi in cyathum membranaceum connatis; antheræ didymæ, breviter exsertæ. Ovarium globosum; stylus capillaris, stigmate breviter exserto capitellato. Anthocarpium ellipsoideum, teres, læve v. leviter costatum, humectatum mucilaginosum. Utriculus globosus. Seminis testa pericarpio adhærens, tenuiter coriacea; embryo uncinatus, albumen sat copiosum involvens, cotyledonibus orbicularibus tenuibus concavis, radicula descendente crassa incurva compressa obtusa extraria.—Herba glabra, glauca, dichotome ramosa, ramis robustis. Folia opposita, breviter petiolata, ovato-oblonga, obtusa, integerrima. Flores in racemos strobilos simulantes terminales et axillares gracile pedunculatos dispositi, majusculi, pallide purpurei.

Species 1, civitatis Nevadæ Americæ boreali-occidentalis incola. Inflorescentia *Bougainvilleæ*, sed stigma capitatum et semen *Mirabilis*. Corolla emarcida tantum visa.

11. **Bougainvillea**, *Comm. ex Juss. Gen.* 91 (*Buginvillæa*) (Josepha, *Vell. Fl. Flum.* 154, *Ic.* iv. *t.* 16).—Flores exinvolucrati, bracteati, costis bractearum singulatim inserti; bracteæ 3, amplæ, foliaceæ, coloratæ. Perianthium tubulosum, leviter curvum, infra medium anguste fusiforme, dein anguste infundibulare et post anthesin tortum, ore breviter 5–6-lobo, marginibus loborum incurvis sæpe crispatis, sinubus plicatis longe intrusis. Stamina 7–8, filamentis capillaribus inæquilongis ima basi in cupulam connatis; antheræ didymæ, inclusæ. Ovarium stipitatum, anguste fusiforme; stylus brevis, lateralis, filiformis, inclusus, stigmate elongato unilaterali. Anthocarpium fusiforme, coriaceum, leviter compressum, acute 5-costatum, humectatum non mucosum. Utriculus stipitatus, cylindraceus v. clavatus. Seminis testa tenuis; embryo uncinatus, cotyledonibus convolutis albumen involventibus, radicula descendente extraria.—Frutices v. arbusculæ rarius sarmentosi v. subscandentes, glabri v. tomentosi, inermes v. spinosi. Folia alterna, petiolata, ovato-rotundata v. elliptico-lanceolata, integerrima. Inflorescentiæ (strobilum mentientes), solitariæ v. fasciculatæ, axillares v. terminales. Flores infra medium bracteæ inserti, perianthii tubo infra medium sæpius virescente, superne roseo v. flavo.

Species 7–8, Americæ australis tropicæ et subtropicæ incolæ. *Chois. in DC. Prodr.* xiii. ii. 437. *Walp. Ann.* v. 721. *Griseb. Pl. Lorentz.* 40. *Gærtn. f. Fruct.* iii. 206, *t.* 216. *Humb. et Bonpl. Pl. Æquin. t.* 49. *Bot. Mag. t.* 4811, (*errore* 4810). *D'Orbign. Voy. Bot. t.* 8. *J. A. Schmidt in Mart. Fl. Bras.* xiv. ii. 349, *t.* 82. Semen a nobis non visum, ex icone Schmidtii descriptum.

12. **Tricycla**, *Cav. Ic.* vi. 78, *t.* 598, *et ex Endl. in Anal. Cienc. Nat.* v. 63, *t.* 40.—Flores bracteati, exinvolucrati; bracteæ 3, sub anthesi floribus multo breviores, demum dilatatæ amplæ membranaceæ, persistentes. Perianthium hypocrateriforme, tubo elongato sensim basin versus ampliato; limbus 5-lobus, subcoriaceus, lobis emarginatis, sinubus breviter induplicatis. Stamina 5–6, filamentis capillaribus inæquilongis ima basi brevissime connatis; antheræ late ellipsoideæ, inclusæ. Ovarium fusiforme; stylus lateralis, brevis, crassiusculus, leviter recurvus, uno latere stigmatosus. Anthocarpium fusiforme, coriaceum, striatum, bracteis inclusum. Utriculus immaturus cylindraceus, tenuiter coriaceus. Semen . . . .—Frutex spinosus, ramulis lignosis, spinis demum apice furcatis. Folia in ramulis abbreviatis fasciculata, parva, lineari-spathulata, coriacea, glabra. Flores ½-pollicares, ad nodos solitarii v. pauci, penduli, bracteis ovato-cordatis puberulis, fructiferis reticulato-venosis; perianthii tubo virescente, limbo luteo.

Species 1, Mendozæ in Chili incola. *Chois. in DC. Prod.* xiii. ii. 436.

13. **Abronia**, *Juss. Gen.* 448 (Tricratus, *L'Hér. ex Willd. Sp. Pl.* i. 807).—Involucrum 5–∞-phyllum, multiflorum, foliolis post anthesin immutatis. Perianthium hypocrateriforme v. anguste infundibulare, tubo elongato supra ovarium constricto; limbi parvi lobi 5, obcordati v. 2-partiti, induplicatim plicati. Stamina 3–5, filamentis capillaribus 2 alternis brevioribus basi in urceolum connatis sursum tubo perianthii

adnatis; antheræ lineari-oblongæ, inclusæ. Ovarium oblique ovoideum; stylus filiformis, stigmate fusiformi incluso. Anthocarpium fusiforme ellipsoideum v. turbinatum, 1–5-costatum v. 3-alatum, coriaceum v. induratum, eglandulosum, humectatum non mucosum. Achænium elongatum. Seminis testa pericarpio adhærens; embryonis cotyledone altera concava albumen farinaceum involvens, altera ad papillam reducta, radicula elongata descendente extraria.—Herbæ di-tri-chotome ramosæ, prostratæ, glanduloso-pubescentes. Folia opposita, paribus inæqualibus, petiolata, carnosula, integerrima. Involucra axillaria et terminalia, longe pedicellata, viridia v. colorata. Flores exserti, fragrantes, rosei, pubescentes.

Species ad 10, Americæ boreali-centralis et -occidentalis incolæ. *Chois. in DC. Prod.* xiii. ii. 435. *S. Wats. Bot. Calif.* ii. 3, *ined.*, *Bot.* 40 *Parall. t.* 31. *Gærtn. f. Fruct.* iii. 181, *t.* 214. *Lam. Ill. t.* 105. *Cav. Ic. t.* 326. *Lindl. in Journ. Hort. Soc.* iv. 82, *cum ic. xylog. Hook. Exot. Fl. t.* 193, 194. *Torr. in Marcy Exped. t.* 18. *Torr. et Gr. Bot. Beckwith Exped. t.* 10. *Bot. Mag. t.* 2879, 5544. *Fl. des Serres*, v. 425 *cum ic.*, xi. *t.* 1095.

A. cycloptera, S. Wats. Bot. 40 Parall. 285, pro parte, A. Gray in Amer. Jour. Sc. ser. 2, xv. 319, cum *A. micrantha*, Torr., specie annua 3–4-andra, duce A. Gray, subgenus *Tripterocalycem* efficiunt, anthocarpio magno 3-alato, alis lateralibus reticulatis, intermedia angusta.

14. **Boldoa**, *Cav. Cat. Hort. Madr.* 1803, *ex Choisy.* (Salpianthus, *Humb. et Bonpl. Pl. Æquin.* i. 154, *t.* 44.)—Flores exinvolucrati, ebracteolati. Perianthium campanulatum v. tubuloso-campanulatum, 4-fidum, lobis dentibusve brevibus subacutis simpliciter valvatis, post anthesin parum auctum. Stamina 3-4, disco parvo unilaterali carnosulo inserta, filamentis filiformibus inæquilongis; antheræ didymæ, exsertæ. Ovarium sessile, late ovoideum v. subglobosum, in stylum filiformem exsertum attenuatum, stigmate acuto. Utriculus basi paullo aucto perianthii inclusus, sessilis, globosus, leviter compressus, uno latere costatus, coriaceus. Seminis testa pericarpio adhærens; embryo hippocrepicus, cotyledonibus planis lineari-oblongis tenuibus albumen copiosum involventibus, radicula elongata descendente extraria.—Herbæ radicibus tuberosis, glabræ v. pubescentes, laxe ramosæ, ramis gracilibus. Folia alterna, petiolata, deltoideo- v. trapezoideo-ovata, obtusa, integerrima, in petiolum abrupte sed longe angustata. Flores parvi v. minuti, in capitula racemosve cymosos axillares et terminales foliaceo-bracteatos dispositi, sessiles v. pedicellati, dense pubescentes.

Species 2, Mexicanæ, quarum una etiam Cubensis. *Chois. in DC. Prod.* xiii. ii. 438. Icon Hort. Matrit. ab auctoribus post Lagascam citata nunquam edita fuit.

15. **Collignonia**, *Endl. Gen. Pl.* 311.—Flores umbellulati; umbellulæ paniculatæ, bracteis amplis membranaceis gracile petiolatis coloratis deciduis immixtæ. Perianthium infundibulari-campanulatum, 3–5-lobum, lobis patulis ovatis subacutis simpliciter valvatis. Stamina 5, hypogyna, filamentis filiformibus inæqualibus ima basi connatis; antheræ didymæ, exsertæ. Ovarium stipitatum, subglobosum; stylus brevis, filiformis, stigmate capitato glanduloso v. maximo et longe penicillato. Anthocarpium late ellipsoideum v. fusiforme, 5-costatum v. late 3-alatum, humectatum non mucosum. Utriculus oblique stipitatus, clavatus, obtusus, coriaceus. Seminis testa pericarpio et albumini parco-carnoso adhærens; embryo uncinatus, cotyledonibus oblongis planiusculis pro ordine angustis, radicula valde elongata descendente extraria.—Herbæ v. frutices scandentes, trichotome ramosi, radice tuberoso, glabri pubescentes v. tomentosi, ramulis gracilibus. Folia opposita, petiolata, integerrima. Umbellulæ in paniculas terminales amplas trichotome ramosas dispositæ, ramulis divaricatis. Flores parvi v. minuti, gracillime pedicellati, cum pedicello non articulati, rosei v. carnei. Fructus pendulus.

Species 6, regionum temperatarum Andium a Nova Granada usque ad Peruviam incolæ. *Chois. in DC. Prod.* xiii. ii. 439. *H. B. et K. Nov. Gen. et Sp.* ii. *t.* 128 (*Abronia*). *Baill. Hist. Pl.* iv. 21. *Griseb. Pl. Lorentz.* 39.

16. **Reichenbachia**, *Spreng. in Bull. Soc. Philom.* 1823, 54, t. 1.—Flores exinvolucrati, ebracteati. Perianthium tubulosum, v. brevissime oblique 4–5-dentatum, dentibus sub-

æqualibus v. 2–3 cæteris longioribus, erectis lanceolatis obtusiusculis induplicato-valvatis. Stamina 2, rarissime 3, hypogyna, filamentis elongatis filiformibus complanatis; antheræ oblongæ, inclusæ, loculis sejunctis obtusis. Ovarium oblique oblongum, compressum, basi attenuatum, apice oblique truncatum, stellato-tomentosum, stigmate sessili subterminali papilloso. Utriculus basi perianthii accrescentis tenuiter coriacei inclusus, coriaceus, tomentosus, inferne costatus. Semen sessile, subglobosum, leviter compressum, basi rostellatum, testa tenuiter crustacea picea nitida, albuminis strato tenui carnoso; embryo uncinatus, cotyledonibus conduplicatis, radicula apice intra seminis rostellum acuta. —Frutex v. arbuscula, pilis stellatis griseo-pubescens, ramulis teretibus. Folia alterna, breviter petiolata, ovata, subacuta, integerrima, apice glandula nuda instructa. Flores numerosi, axillares, fasciculati, pedicellati, tomentosi, pedicellis basi minute bracteolatis.

Species 1, Brasiliæ australis et Paraguay incola. *Hook. f. Ic. Pl. t.* 1290.

Tribus II. Pisonieæ.

17. **Pisonia,** *Linn. Gen. n.* 1162. (Calpidia, *Thou. Hist. Veg. Isles Afr. Aust.* (1804) 37, *t.* 10. Ceodes, *Forst. Char. Gen.* 141, *t.* 71. Torrubia, Bessera, Pallavia, et Columella, *Vell. Fl. Flum.* 139, 147, 151, 155, *Ic.* iii. *t.* 150, iv. *t.* 2, 12, 17.)—Flores dioici, rarius monoici v. hermaphroditi, exinvolucrati, 2-3-bracteolati. Perianthium ♂ tubuloso- v. infundibulari-campanulatum, ♀ magis oblongum, tubo basi sæpe ampliato; limbi lobi v. dentes 5, breves, induplicato-valvati, erecti v. patentes. Stamina 6–10, filamentis inæquilongis v. alternis longioribus filiformibus, basi in tubum v. annulum connatis; antheræ oblongæ v. didymæ, exsertæ. Ovarium elongato-ovoideum, sessile, in stylum gracilem inclusum v. exsertum attenuatum, stigmate capitellato peltato v. sæpius fimbriato-multifido laciniis capillaribus. Anthocarpium coriaceum v. induratum rarius carnosulum, oblongum lineare v. clavatum, cylindraceum compressum v. pentagonum, teres sulcatum v. costatum, læve tuberculatum v. glandulis stipitatis viscum exsudentibus præditum. Utriculus elongatus, membranaceus. Seminis testa hyalina, pericarpio adhærens; embryo rectus, cotyledonibus latis tenuibus contortuplicatis basi v. basi et apice cordatis albumen parcum plus minusve mucosum involventibus, radicula brevi infera.—Arbores et frutices, inermes v. rarius spinosi, glabri v. pubescentes, erecti v. rarius subscandentes. Folia opposita v. sparsa, sessilia v. petiolata, oblonga ovata v. lanceolata, integerrima. Flores parvi, rosei virescentes v. flavidi, in cymas paniculatas subsessiles v. pedunculatas dispositi. Fructus parvus v. majusculus.

Species ad 60, pleræque Americæ tropicæ incolæ, paucæ Asiaticæ et insulis Pacificis indigenæ, 6 in insulis Mascarensibus; *P. aculeata* sola, species gerontogea, hactenus in Africa continentali detecta. *Chois. in DC. Prod.* xiii. ii. 440. *Walp. Ann.* v. 722. *Miq. Fl. Ind. Bat.* i. i. 989. *Griseb. Fl. Brit. W. Ind.* 70. *Benth. Fl. Austral.* v. 279. *Baker, Fl. Maurit.* 262. *Casaretto, Nov. Stirp. Dec.* 68. *J. A. Schmidt in Mart. Fl. Bras.* xiv. ii. 353, *t.* 83, 84. *Gærtn. Fruct.* i. *t.* 76. *Lam. Ill. t.* 861. *Endl. Iconogr. t.* 30. *Presl. Symb. t.* 56. *Deless. Ic. Sel.* iii. *t.* 87. *Jacq. Hort. Schœnb.* iii. *t.* 314. *Link. Kl. et Otto, Ic. Pl. t.* 15. *Walp. in Pl. Meyen. t.* 11. *Seem. Bot. Her. t.* 34. *Wight Ic. t.* 1763 *ad* 1765. *Hook f. Fl. Nov. Zel.* i. *t.* 50. Albuminis copia et indoles de specie in speciem variat, mucilaginosa carnosa v. subfarinacea, quare genus *Calpidia*, Thou., a Brongn. et Gris. in Ann. Sc. Nat. ser. 4, i. 339, restitutum, delendum est.

18. **Neea,** *Ruiz et Pav. Prod. Fl. Per. et Chil.* 52, *t.* 9. (Mitscherlichia, *Kunth in Abhandl. Berl. Akad.* 1831, 209 *et* 1832, *t.* 3.)—Flores monoici v. dioici, exinvolucrati, bracteolati. Fl. ♂: Perianthium urceolatum globosum v. campanulatum, breviter 4-5-dentatum, ore aperto v. constricto v. fere clauso, dentibus breviter induplicato-valvatis. Stamina 5–10, inclusa, fundo perianthii inserta, filamentis inæquilongis; antheræ oblongæ. Ovarii rudimentum sæpius 0. Fl. ♀: Perianthium oblongum v. urceolatum, tubo infra medium sæpissime crasse carnoso ibidemque dilatato v. angustato intus supra ovarium constricto, ore 4–5-dentato sæpissime contracto. Staminum rudimenta medio tubo inserta, filamentis brevissimis; antheræ cassæ. Ovarium anguste ovoideum, basi carnosa perianthii inclusum; stylus terminalis, filiformis, rarissime exsertus, stigmate simplici v.

penicillato. Anthocarpium ellipsoideum v. rarius ovoideum v. turbinatum, limbo parvo clauso perianthii coronatum, teres v. sulcatum, cylindraceum v. compressum, eglandulosum. Utriculus membranaceus. Seminis testa hyalina, pericarpio adhærens; embryo rectus, cotyledonibus latis tenuibus contortuplicatis basi v. basi et apice cordatis albumen parcum carnosum involventibus, radicula brevi infera horizontali apice deflexa.—Arbores et frutices, erecti v. subscandentes, glabri v. pubescentes, ramulis teretibus. Folia sæpissime opposita, petiolata, coriacea, ovata v. lanceolata, integerrima, penninervia. Flores parvi, in cymas axillares pedunculatas dispositi, sessiles v. pedicellati, sæpius basi 3-bracteolati, albi rosei flavi brunnei v. virescentes, interdum odori, bracteolis minutis rarius filiformibus.

Species ad 30, Americæ tropicæ incolæ pleræque boreali-Brasilienses et Peruvianæ, paucæ insularum Indiæ occidentales incolæ, una Guatemalensis. *Chois. in DC. Prod.* xiii. ii. 447. *Griseb. Fl. Brit. W. Ind.* 71. *Poepp. et Endl. Nov. Gen. et Sp.* ii. *t.* 161, 162. *Oerst. in Overs. K. Dansk. Selsk. Forh.* 1863, 9, *t.* 1. *J. A. Schmidt in Mart. Fl. Bras.* xiv. ii. 365, *t.* 85. Genus a *Pisonia* cui adjungitur a Baillonio, Hist. Pl. iv. 10, forma perianthii, fl. ♂ et staminibus inclusis distinguendum.

19. **Timeroya,** *Montrousier in Mém. Acad. Imp. Sc. Lyon,* x. 247. (Viellardia, *Brongn. et Gris. in Ann. Sc. Nat. ser.* 5, i. 338.)—Flores hermaphroditi, exinvolucrati, minute bracteolati v. ebracteolati. Perianthium campanulatum v. infundibulari-campanulatum, tubo basi turgido; limbi 5-goni lobi 5, valvati, breves. Stamina ad 30, inclusa, filamentis capillaribus inæquilongis ima basi circa ovarium connatis, antheræ didymæ. Ovarium elongato-ovoideum, in stylum filiformem attenuatum, stigmate obliquo decurrente papilloso-fimbriato. Anthocarpium lineari-oblongum, induratum, 5-gonum, angulis viscum exsudentibus. Utriculus fusiformis, sessilis, membranaceus. Seminis testa pericarpio cohærens, membranacea; embryo rectus, cotyledonibus latis tenuibus convolutis, albumen parcum mucilaginosum involventibus basi cordatis, radicula intra sinum cotyledonum abscondita recta brevi infera.—Arbores glabri, ramulis crassiusculis. Folia alterna v. subopposita, petiolata, elliptica v. lanceolata, integerrima. Flores in cymas corymbosas axillares et terminales dispositi, pedicellati, glabri v. furfuraceo-pubescentes.

Species 2 v. 3, Novæ Caledoniæ incolæ.

20. **Cephalotomandra,** *Karst. et Trian. in Linnæa,* xxviii. 429.—Flores dioici (v. polygami?) exinvolucrati, minute 3-bracteolati. Fl. ♂: Perianthium urceolato-campanulatum, carnosulum; limbus breviter 5-lobus, lobis plicato-valvatis. Stamina 25–30, inclusa, circa basin ovarii conferta, filamentis crassiuscule filiformibus inæquilongis; antheræ oblongo-didymæ, apiculatæ, loculis sæpe inæqualibus altero altius inserto. Fl. ♀: Perianthium post anthesin coarctatum; limbus 5-lobus, persistens. Stamina subexserta, antheris effœtis. Ovarium ovoideum, sessile, in stylum filiformem acutum intus longitudinaliter stigmatosum marginibus papillosis attenuatum. Anthocarpium lignosum, rugosum, 10–12-costatum. Seminis testa membranacea, cum pericarpio connata; embryo rectus, cotyledonibus cordatis albuminis residua includentibus, radicula infera.—Arbor parva. Folia opposita, petiolata, ampla, elliptica, acuminata, costa crassa, integerrima, lucida, glaberrima. Flores in cymas longe pedunculatas axillares multifloras pubescentes trichotome ramosas dispositi, gracile pedicellati, ramulis pedicellisque divaricatis. Fructus juglandis magnitudine.

Species 1, Novæ Granadæ prope Bogota incola.—*Walp. Ann.* v. 721. Flores ♀ et fructus a nobis non visi; in fl. ♂ ovarium perfectum ovulo bene evoluto invenimus.

Tribus III. Leucastereæ.

21. **Leucaster,** *Chois. in Mém. Soc. Phys. Gen.* xii. 167, *et in DC. Prod.* xiii. ii. 457.—Flores hermaphroditi, exinvolucrati, 2-bracteolati. Perianthium campanulatum, coriaceum, stellato-canum, post anthesin accrescens, persistens; limbus plicato-5-dentatus, fere integer. Stamina 2, hypogyna, fundo perianthii immersa, filamentis brevibus subulatis, puberulis; antheræ magnæ, dorso affixæ, breves, latæ, coriaceæ, rimis latis

antice dehiscentes. Ovarium globosum, inter stamina compressum, tomentosum ; stigma sessile, elongatum, ovarii verticem coronans, crassum, medio sulcatum ; ovulum globosum, subsessile. Utriculus basi perianthii ampliati angulati ore involuto immersus, globosus, canus, pericarpio crasso costato. Semen liberum ; embryo conduplicatus, cotyledonibus albumen parcissimum includentibus, radicula infera extraria.—Frutex subvolubilis, ramulis alternis gracilibus, partibus novellis pube stellata canis. Folia alterna, petiolata, elliptico-lanceolata, subobtusa, integerrima. Flores in cymas axillares et terminales foliaceo-bracteatas dispositi, pedicellati.

Species 1, Brasiliana, perperam ad *Reichenbachiam* relata a *J. A. Schmidt in Mart. Fl. Bras.* xiv. ii. 372 *t.* 88.

22? **Andradea,** *Allemão, Diss. Andrad.* 1845, *cum ic.*—Flores monoici, exinvolucrati, ebracteolati. Perianthium infundibulare, tubo brevi ; limbi lobi 3 rarius 4, tubo longiores, oblongi, subacuti, reflexo-patentes, valvati, non induplicati. Stamina 12–20, lobis perianthii breviora, filamentis gracilibus æquilongis pubescentibus basi in annulum membranaceum connatis ; antheræ lineares, rimis lateralibus dehiscentes. Ovarium sessile, turbinatum, costatum, tomentosum ; stylus terminalis, sigmoideus, stigmate laterali cristæformi papilloso. Utriculus parvus, globoso-turbinatus, basi perianthii ad integrum persistente vestitus, stylo indurato terminatus ; pericarpium membranaceum. Semen erectum, subreniforme, cavitatem non implens, testa lævi fusca membranacea embryoni subadhærente ; embryo conduplicatus, cotyledonibus foliaceis corrugatis super albumen evanidum applicitus, radicula extraria infera.—Arbor excelsa, trunco crasso, ramulis foliis subtus et inflorescentia stellato-tomentellis. Folia alterna, petiolata, elliptico-ovata, acuminata, integerrima, membranacea. Flores in racemos paniculatos axillares et terminales dispositi, erecti, pedicellati, majusculi ; alabastra cylindraceo-ovoidea, pendula.

Species 1, Brasiliæ montium provinciæ Espirito Santo incola. *Walp. Ann.* iii. 935. Genus adhuc dubium, a nobis non visum, ex schedis et icone auctoris (in Mart. Fl. Bras. xiv. ii. t. 87 repetita) descriptum.

23. **Cryptocarpus,** *H. B. et K. Nov. Gen. et Sp.* ii. 187, *t.* 123, 124.—Flores hermaphroditi. Perianthium campanulatum, 4–5-lobum ; lobis brevibus obtusis inflexo-valvatis, fructiferum clausum, immutatum. Stamina 4–5, filamentis inæquilongis elongato-subulatis basi in cupulam connatis ; antheræ didymæ. Ovarium oblique obovoideum ; stylus subterminalis, filiformis v. subulatus, stigmate subterminali. Fructus obovoideo-globosus, perianthio clauso inclusus, pericarpio tenuiter coriaceo. Semen late pyriforme, erectum, testa coriacea rugulosa fusca ; embryo gracilis, periphericus, imperfecte annularis, albumen copiosum farinaceum cingens, cotyledonibus linearibus radicula infera vix latioribus. —Frutices carnosuli, prostrati v. subscandentes, cano-puberuli, ramis subangulatis. Folia alterna, exstipulata, petiolata, ovata v. cordato- v. rhombeo-ovata, integerrima. Flores parvi, cymosi, cymis in paniculas repetite dichotomas axillares et ad apices ramulorum longe spicatas dispositi, ebracteati et ebracteolati.

Species 2, altera montium Mexici altera littorum tropicarum Americæ australis incola. *Moq. in DC. Prod.* xiii. ii. 88. *Moric. Pl. Nouv. Amer. t.* 50.

Ordo CXXIX. **ILLECEBRACEÆ.**

R. Br. Prod. 413. Paronychieæ, St. Hil. in Mem. Mus. ii. 276. Caryophyllearum Tribus Illecebreæ, Pteranthеæ, Pollichieæ, et Subordo Scleranthеæ, Endl. Gen. Pl. 956 et seq. Illecebraceæ et Scleranthaceæ, Lindl. Veg. Kingd. 499 et 528.

Flores regulares, sæpissime hermaphroditi, inconspicui. *Perianthium* herbaceum v. coriaceum, post anthesin persistens et sæpius induratum, 4–5-lobatum v. -partitum, lobis segmentisve erectis, rarius patentibus, imbricatis. *Petala* 0, nisi staminodia minuta v. interdum subpetaloidea inter stamina posita. *Stamina* tot quot perianthii segmenta et iis opposita, rarius pauciora v. plura, perigyna v. rarius subhypogyna; filamenta subulata, brevia, libera v. ima basi in annulum membranaceum connata, v. margini disci tenuis inserta. *Antheræ* breves, didymæ, rarius oblongæ, dorso affixæ, rimis anticis dehiscentes. *Ovarium* liberum, sessile, ovoideum v. subglobosum, rarius compressum, 1-loculare, interdum filo tenuissimo conductore percursum. *Stylus* 1, terminalis, apice 2–3-dentatus, v. styli 2, rarissime 3, apicibus introrsum stigmatosis. *Ovula* 1, rarius 2, e funiculis basilaribus erecta v. pendula et inversa, amphitropa anatropa v. semi-anatropa. *Utriculus* rarissime nux, crustaceus, membranaceus, indehiscens v. basi lacerus, 1-spermus, perianthio inclusus. *Semen* erectum v. inversum, ovoideum clavatum orbiculare v. lenticulare, testa tenuiter membranacea, exarillata; albumen farinaceum v. carnosum, sat copiosum v. parcum. *Embryo* nunc annularis, albumen cingens, cotyledonibus angustis, radicula elongata incumbente supera v. infera, nunc clavatus dorsalis, albumini applicitus, rectus v. leviter incurvus, cotyledonibus oblongis, radicula infera.

Herbæ annuæ v. perennes, rarius fruticuli v. suffrutices, suberectæ diffusæ v. pulvinatim cæspitosæ. Folia in generibus normalibus opposita, parva, integerrima, basi sæpius connata, *Scleranthо* excepto integerrima. Stipulæ scariosæ, simplices bifidæ v. connatæ, rarius 0. Inflorescentia varia, in generibus plerisque dichotome cymosa. Flores parvi, herbacei, virides v. albi, sæpe scarioso-bracteati.

Species ad 90, per orbem terrarum regionibus frigidis exceptis dispersæ, in locis siccis calidisque frequentiores.

Ordo *Amarantaceis* certissime affinis sed stipulis, perianthio herbaceo staminibusque perigynis differt. *Caryophylleæ* distinguuntur floribus petaliferis, ovario pluriovulato, fructuque capsulari; *Portulaceæ* sepalis 2, corolla, capsulæque dehiscentia. *Ficoideæ* connexæ sunt ope *Adenogrammatis* cui ovarium 1-loculare ovulo basilari. *Phytolaccacearum* genera monocarpica 1-ovulata recedunt stylo laterali, habitu, foliis amplis, inflorescentia racemosa et cotyledonibus latioribus. *Lastarriæa* genus *Polygonearum*, habitu multisque notis *Illecebraceis* accedit, sed differt ovulo orthotropo, aliisque notis. Tribus *Scleranthearum* transitum ad *Caryophylleas* demonstrat. *Ficoidearum* tribus *Mollugineæ* differt ovario polycarpico et staminibus sæpissime hypogynis.

FORMÆ ABNORMES.

Pedunculus foliaceus in *Pterantho*.

Folia omnia *Dysphaniæ* et superiora *Corrigiolæ* alterna.

Perianthii segmenta valvata in *Illecebro*, *Dysphanio* et *Pentacæna*.

Stamina hypogyna in *Dysphania*.

Ovarium tubo perianthii connatum in *Sclerocephalo* et *Comete*.

Ovula 2 v. 4 in *Pollichia*, *Achyronychia* et *Habrosia*.

Nux crustacea in *Corrigiola*.

CONSPECTUS GENERUM.

Tribus I. Pollichieæ. Flores omnes consimiles, bracteis scariosis basi involucrati. Ovarium 1–4-ovulatum. Embryo dorsalis, rectus v. leviter curvus, radicula infera.

Excepta: Folia exstipulata et flores exinvolucrati in *Dysphania*.

* *Ovarium* 1-*ovulatum*.

1. Illecebrum. Perianthii segmenta 5, æqualia, suberosa a latere compressa.—*Europ.*, *Afric. occ.*

2. Pentacæna. Perianthii segmenta 5, æqualia v. inæqualia, coriacea, dorso longe crasseque spinosa.—*Amer. occid. et aust. extratrop.*

3. Dysphania. Perianthii segmenta 2–3, unguiculata, suberosa, dorso crasse gibbosa. *Folia alterna.—Australia.*

** *Ovarium 2–4-ovulatum.*

4. Pollichia. Perianthii limbus herbaceus.—*Afric. trop. et austr.*

5. Achyronychia. Perianthii tubus coriaceus, limbus scariosus.—*Mexico ex Nov. Mexic.*

Tribus II. Paronychieæ. Flores omnes consimiles, bracteis scariosis sæpius involucrati. Ovarium 1-ovulatum. Embryo annularis. Folia opposita v. rarius alterna.

6. Paronychia. Perianthii involucrati 5-partiti segmenta sub apice cucullata, dorso cornuta mucronata v. apiculata. Stigmata 2. Radicula sæpissime supera v. ascendens.—*Europ. aust., Oriens, Africa, America.*

7. Herniaria. Perianthii fere nudi 5-partiti segmenta mutica. Stigmata 2. Radicula infera.—*Europ., Asia occid., Afr. bor. et austr.*

8. Siphonychia. Perianthii 5-fidi lobi mutici. Stamina alte perigyna. Stylus filiformis. Radicula supera.—*Amer. bor.*

9. Anychia. Perianthii 5-partiti segmenta mutica v. subcornuta. Stamina basi segmentorum inserta. Styli 2, breves. Radicula supera.—*Amer. bor.*

10. Corrigiola. Perianthii 5-partiti segmenta mutica. Stylus 3-partitus. *Nux crustacea.—Europ., Afric., Amer.*

11. Gymnocarpos. Perianthii 5-partiti segmenta aristata. Stylus 3-dentatus.—*Afric. bor., Oriens.*

12. Sclerocephalus. Flores cum foliis floralibus *in capitulum spinosum cohærentes.—Afric. bor., Asia occid.*

Tribus III. Pterantheæ. Flores 3-ni, dimorphi, centralis perfectus, laterales imperfecti v. deformati. Ovarium 1-ovulatum. Embryo dorsalis, fere rectus, radicula infera. Folia sæpius stipulata.

13. Pteranthus. Pedunculi obovati, foliacei. Folia floralia pinnatipartita. Perianthii segmenta 4.—*Afric. bor., As. occid.*

14. Cometes. Pedunculus simplex. Folia floralia pinnatipartita. Perianthii segmenta 5.—*Afric. bor. et aust., Asia occid.*

15. Dicheranthus. Pedunculus simplex. Folia floralia integra. Perianthii segmenta 5. —*Ins. Canariens.*

Tribus IV. Scleranthеæ. Flores omnes consimiles. Ovarium 1-2-ovulatum. Embryo annularis.—Folia opposita, basi connata, exstipulata.

16. Scleranthus. Perianthium 4–5-fidum. Stamina perigyna. Ovarium 1-ovulatum.—*Europ., Afric. bor., Oriens, Australas.*

17. Habrosia. Perianthium 5-partitum. Stamina fere hypogyna. Ovarium 2-ovulatum.—*Asia occid.*

GENERA AFFINIA AUT EXCLUSA.

Adenogramma, Reich., et Telephium, Linn. sub. **Ficoideis** inveniuntur supra i. 858, 857.

Adenarium Raf. (*Arenariæ sect. Honckenya*), Cerdia, Moç. et Sessé, Drymaria, Willd., Lœfflingia, Linn., Ortegia, Lœffl., Polycarpæa, Lam., Polycarpon, Lœffl., Queria, Linn., Spergula, Linn., Spergularia, Pers., Sphærocoma, T. Anders., et Stipulicida, Rich., omnes ad **Caryophylleas** reddimus, supra i. 152 ad 154.

Winterlia, Spreng. est *Ammanniæ* species, inter **Lythraceas**, supra i. 776.

Lastarriæa, Remy, inter **Polygonaceas** invenitur.

Guilleminea, H. B. et K. et Lithophila, Swartz, inter **Amarantaceas** quærendæ.

Tribus I. Pollichieæ.

1. **Illecebrum,** *Linn. Gen. n.* 290 *pro parte.*—Flores hermaphroditi v. unisexuales, basi bracteis scariosis involucrati. Perianthium suberosum, 5-partitum, album ; segmenta oblonga, crassa, a latere compressa, dorso subacuta, facie excavata, valvata, apice conico in aristam producto, demum conniventia indurata et utriculum includentia. Stamina 5,

minima, basi segmentorum inserta, staminodiis totidem minutis setaceis alternantia, filamentis brevibus setaceis ; anthera didyma. Ovarium minimum, ovoideum ; stylus brevissimus, stigmate capitellato v. 2-lobo ; ovulum basilare, erectum, anatropum, funiculo brevi. Utriculus membranaceus, basin versus in lacinias 5–10 dehiscens. Semen erectum, oblongum, subcompressum, testa crustacea ; embryo dorsalis, albumini farinaceo applicitus, anguste clavatus, leviter incurvus, radicula infera.—Herba annua, pusilla, tenuis, glaberrima, diffusa, multicaulis. Folia opposita et pseudo-verticillata, sessilia, ovata oblonga v. rotundata, integerrima ; stipulæ minutæ, scariosæ. Flores minuti, nivei, ad axillas omnes conferti v. pseudo-verticillati, brevissime pedicellati, pedicellis basi scarioso-bracteatis.

Species 1, Europæ occidentalis et Africæ borealis incola. *DC. Prod.* iii. 369. *Nees Gen. Fl. Germ. Gærtn. f. Fruct.* iii. *t.* 184. *Fl. Dan. t.* 335.

2. **Pentacæna,** *Bartl. in Reliq. Hænk.* ii. 5, *t.* 49.—Flores scarioso-bracteati. Perianthii coriacei demum indurati tubus brevis ; segmenta 5, oblonga, concava, valvata, omnia margine fimbriata, dorso in spinam elongatam validam rigidam erectam v. patentem producta, v. 2 interiora minora brevius armata v. mutica, demum conniventia et utriculum includentia. Stamina 3–5, minuta, basi segmentorum inserta, filamentis brevissimis basi dilatatis ; antheræ didymæ ; staminodia minuta, ovata v. oblonga, integra v. 2-dentata. Ovarium basi contractum, late ovoideum ; stylus brevissimus, stigmatibus 2 punctiformibus. Utriculus oblongus v. globosus, membranaceus, demum longitudinaliter ruptus. Semen ellipsoideum obovoideum v. globosum, erectum, hilo prope basin laterali, testa subcrustacea v. coriacea pallida lævi, albumine farinaceo sat copioso ; embryo dorsalis, clavatus, incurvus, cotyledonibus brevibus obtusis, radicula infera.—Herbæ parvulæ, cæspitosæ, ramosissimæ, ramulis foliosis tomentosis. Folia alterna, conferta, sæpe squarrosa, subulato-setacea, mucronata ; stipulæ triangulares, magnæ, scarioso-argenteæ, integerrimæ v. fimbriatæ, longe acuminatæ. Flores juxta totam ramulorum longitudinem conferti, axillares, sessiles, inconspicui.

Species 2 v. 3, Americæ occidentalis ab Oregon usque ad Chili incolæ. *DC. Prod.* iii. 372 (*Paronychiæ* sect. *Acanthonychia*), *Mem. Paronych. t.* 4. *Walp. Rep.* 1, 261, *Ann.* i. 80. *St. Hil. Fl. Bras.* ii. *t.* 113 (*Paronychia*). Acanthonychia, *Rohrb. in Mart. Fl. Bras.* xiv. ii. 249. *t.* 56.

Cardionema, *DC. Prod.* iii. 372, *Mem. Paronych. t.* 1, est *Pentacænæ* species, staminodiis pro filamentis in icone *Mociniano* depictis.

3. **Dysphania,** *R. Br. Prod.* 411.—Flores minimi, axillares, dense fasciculati, ebracteati et ebracteolati, exteriores cujusve fasciculi sæpius hermaphroditi, cæteri ♀. Perianthii foliola 2–3, stipitata, concava, fructifera accrescentia dorso superne in gibbum rotundatum producta, alba, cellulosa, enervia, utriculum includentia. Stamina 1–3, basi perianthii inserta, filamentis compressis ; antheræ late oblongæ, exsertæ. Discus 0. Ovarium obovoideum ; styli 1–2, capillares, breviusculi, stigmatibus simplicibus. Utriculus late obovoideus v. ellipsoideus, rectus v. subobliquus, hyalinus, pericarpio semini arcte adhærente. Semen utriculo conforme, testa brunnea lævi coriacea albumini carnoso arcte adhærente ; embryo dorsalis, leviter curvus, cotyledonibus linearibus, radicula cylindracea infera.—Herbæ pusillæ, prostratæ v. suberectæ, glaberrimæ, ramosæ. Folia parva, alterna, obovata v. oblonga, petiolata v. sessilia, integerrima. Florum fasciculi in capitula axillaria v. in spicas terminales densissime aggregati, sessiles v. perianthiis in stipitem brevissimum angustatis, demum albi. Semen perianthio multo brevius, brunneum.

Species 3, Australiæ incolæ. *Benth. Fl. Austral.* v. 164.

Genus valde anomalum, perianthii foliolis crasse spongiosis valvatis albis, semine, et imprimis embryone, a *Chenopodiaceis* longe recedens et *Illecebrum* miro modo in mentem revocans, a cæteris *Illecebraceis* differt insigniter foliis alternis exstipulatis, et staminibus hypogynis.

Testa seminis coriacea magis quam crustacea et embryo certe omnino dorsalis et erectus etsi leviter curvus, et nullo modo periphericus. Stylos 2 vidimus in specie Brunoniana, sed rariter.

4. **Pollichia,** *Soland. in Ait. Hort. Kew.* i. 5. (Neckeria, *Gmel. Syst. Nat.* ii. 16,

Meerburgia, *Mœnch, Meth. Suppl.* 116.)—Flores bracteis scariosis involucrati. Perianthium herbaceum, urceolatum, 5–6-lobum, interdum post anthesin baccatum, tubi ore disco incrassato lobato clauso; lobi breves, obtusi, erecti, marginibus hyalinis. Stamina 1–2, disco inserta, filamentis brevissimis subulatis; antheræ oblongæ; staminodia 0. v. minima. Ovarium ovoideum, in stylum brevem filiformem attenuatum, stigmatibus 2 minutis; ovula 2, basilaria, semi-anatropa, funiculis brevibus. Utriculus globosus v. ovoideo-oblongus, perianthio interdum baccato æquilongus et eo inclusus, membranaceus, 1–2-spermus. Semina oblonga v. ovoidea, testa hyalina, pericarpio et albumini dense farinaceo adhærente. Embryo dorsalis, leviter incurvus, cotyledonibus oblongis planiusculis, radicula accumbente brevi infera.—Fruticulus diffusus, dichotome ramosus, pubescens, ramulis strictis teretibus. Folia opposita et pseudo-verticillata, sessilia, lanceolata, acuminata, integerrima, plana, enervia; stipulæ scariosæ, liberæ. Flores minuti, in cymas subsessiles axillares densifloras interdum post anthesin comosas congesti; bracteis bracteolisque scariosis albis.

Species 1, Africæ tropicæ et australis incola. *DC. Prodr.* iii. 377. *Gaertn. f. Fruct.* iii. *t.* 213. *Smith, Spicileg. t.* 1.

Duæ formæ ut nobis videtur occurrunt, altera perianthio bracteisque post anthesin immutatis, utriculo ovoideo; altera perianthio bracteisque demum fere baccatis, utriculo globoso.

5. **Achyronychia,** *Torr. et Gr. in Proc. Amer. Acad.* vii. 330.—Flores bracteis stipuliformibus involucrati. Perianthii tubus turbinatus, coriaceus, 10-nervis, demum cylindraceus v. obconicus; limbi lobi 5, rotundati, stellato-patentes, argenteo-scariosi, medio v. basi tantum coriacei. Stamina fauci perianthii inserta, nunc cum staminodiis setiformibus conjunctis ad 15, quorum unum solum antheriferum anthera didyma, cætera ananthera, nunc 5, filamentis brevissimis, antheris lineari-oblongis, cum staminodiis brevibus triangularibus alternantia. Ovarium turbinatum v. ellipsoideum; stylus brevis v. elongatus, apice 2-fidus; ovula 2-4, erecta, basilaria, anatropa, funiculis brevibus. Utriculus membranaceus, pyriformis v. ellipsoideus, 1-spermus. Semen ellipsoideo-pyriforme, erectum, testa tenui albumini farinaceo adhærente, chalaza infra medium laterali oblonga; embryo dorsalis, clavatus, leviter incurvus, cotyledonibus brevibus obtusis, radicula infera.—Herbæ parvulæ, depressæ, annuæ, a basi ramosæ, glabræ v. tomentosæ. Folia parva, opposita, integerrima, crassiuscula, enervia; stipulæ scariosæ. Flores axillares, cymoso-congesti, minuti.

Species 2, altera, *A. Cooperi*, Gray, l.c., Wats. Bot. Calif. i. 73, Novo-Mexici et Californiæ incola, foliorum paribus inæqualibus, perianthii lobis basi tantum coriaceis, disco 0, staminodiis filamentisve ad 15, uno solo antherifero, ovario turbinato 2-ovulato, stylo brevi; altera, *A. Palmeri*, Hook. f., Mexici centralis incola (Herb. Parry et Palmer, No. 53), foliorum paribus inæqualibus, perianthii lobis medio late coriaceis, fauce disco annulari 5-lobo instructa, staminibus 5 filamentis brevissimis, antheris lineari-oblongis, staminodiis 5 latis, ovario stipitato elongato, stylo elongato, ovulis 2–4.

Tribus II. Paronychieæ.

6. **Paronychia,** *Juss. in Mem. Mus. Par.* ii. 389.—Flores bracteis stipuliformibus scariosis involucrati. Perianthium herbaceum, post anthesin sæpius coriaceum, 5-partitum; segmenta oblonga v. lineari-oblonga, æqualia, apicibus cucullatis dorso mucronatis aristatis v. cornutis, marginibus sæpius membranaceis. Stamina 5, rarius 3–4 v. plura, perigyna, filamentis subulatis v. filiformibus; antheræ didymæ; staminodia 5, setiformia minima v. 0. Ovarium obovoideum v. subglobosum, in stylum brevem v. elongatum apice 2-fidum attenuatum, lobis intus stigmatosis: ovulum basilare, amphitropum, funiculo brevi v. longiusculo, erectum v. subpendulum. Utriculus membranaceus, perianthio inclusus, a basi sæpe longitudinaliter ruptus. Semen oblongum globosum v. ovoideum, resupinatum v. oblique ascendens, testa membranacea lævi; embryo annularis, albumen farinaceum cingens, radicula ascendente v. supera rarius laterali v. subbasilari.—Herbæ annuæ v. perennes, erectæ v. diffusæ, sæpius dichotome

ramosæ. Folia opposita, oblonga lanceolata v. subulata; plana v. rarissime marginibus recurvis, integerrima; stipulæ sæpius amplæ, scariosæ, nitidæ. Flores minuti, axillares v. rarius in cymas terminales dispositi, sæpius dense fasciculati et inter stipulas reconditi.

Species ad 40, regionis Mediterraneæ, Africæ borealis, Arabiæ Americæque temperatæ et calidæ incolæ; una Angolensis. *DC. Prod.* iii. 370. *Walp. Rep.* i. 261 *excl. sp. n.* 3 *et* 4, v. 74. *Ann.* i. 81, ii. 89. *Boiss. Fl. Or.* i. 742. *Nees Gen. Fl. Germ.* *Gærtn. Fruct. t.* 128. *Rohrb. in Mart. Fl. Bras.* xiv. ii. 251, *t.* 57. *Boiss. Voy. Esp. t.* 62. *Sibth. Fl. Græc. t.* 245. *Webb Phyt. Canar. t.* 20. *Cav. Ic. t.* 137 (*Herniaria*). *Del. Fl. Egypt. t.* 18. *Hook. Fl. Bor. Am. t.* 75.

Plottzia, *Arn. in Lindl. Introd. Nat. Syst. ed.* 2, 441, *est Paronychia dichotoma*, Nutt. ex Torr. et Gr. Fl. N. Am. i. 171.

7. **Herniaria,** *Linn. Gen. n.* 308.—Flores hermaphroditi v. unisexuales, bracteis parvis v. minutis. Perianthium herbaceum, alte 4–5-fidum, tubo brevi turbinato; segmenta æqualia v. inæqualia, obtusa, mutica. Stamina 3–5, perigyna, æqualia v. inæqualia, filamentis setaceis; antheræ breves; staminodia 4–6, setacea minuta v. 0. Ovarium ovoideum; stylus brevissimus, 2-fidus v. 2-partitus, lobis intus stigmatosis; ovulum basilare, erectum, funiculo brevi. Utriculus perianthio inclusus, ovoideus, membranaceus. Semen erectum, lenticulare, funiculo basilari, testa crustacea nitida; embryo annularis, albumen farinaceum cingens, cotyledonibus linearibus, radicula elongata descendente.—Herbæ annuæ v. basi perennante, humifusæ, ramosissimæ, glabræ v. hirsutæ. Folia opposita, alterna v. fasciculata, parva, subsessilia, integerrima; stipulæ parvæ, scariosæ, integræ v. ciliatæ. Flores minuti, virides, in axillis conferti, subsessiles v. pedicellati, bracteis bracteolisque parvis.

Species 8–10, Europæ mediæ et australis, Asiæ occidentalis usque ad Indiam boreali-occidentalem et Africæ borealis incolæ, quarum una etiam Austro-africana. *DC. Prod.* iii. 367. *Mem. Paronych. t.* 3. *Walp. Rep.* i. 260, v. 74, *Ann.* i. 79. *Boiss. Fl. Or.* i. 739, *Voy. Esp. Bot. t.* 62. *Gærtn. f. Fruct.* iii. *t.* 213. *Nees Gen. Fl. Germ.* *Sibth. Fl. Gr. t.* 252.

Genus habitu potius quam characteribus a *Paronychia* distinguendum. *H. polygonoidem* Cav. (*Paronychiam suffruticosam*, Lam.) et *H. paniculatam* Webb, ad *Paronychiam* referimus ob habitum, et perianthii segmenta dorso sub apice cornuta.

8. **Siphonychia,** *Torr. et Gr. Fl. N. Am.* i. 173.—Flores bracteis stipuliformibus involucrati. Perianthium herbaceum, campanulatum, ad medium 5-lobum; lobi petaloidei, plani v. apicibus incurvis, mutici. Stamina 5, alte perigyna, cum staminodiis totidem subulatis alternantia, filamentis subulatis; antheræ didymæ. Ovarium oblongo-ovoideum, in stylum filiformem elongatum attenuatum, stigmatibus 2 parvis; ovulum a funiculo basilari suspensum, campylotropum. Utriculus ovoideus, tubo perianthii inclusus, membranaceus. Semen lenticulare, ab apice funiculi pendulum, resupinatum, testa lævi; embryo annularis, albumen farinaceum cingens, radicula supera.—Herba annua, humifusa, dichotome ramosa, puberula, ramulis diffusis patentibus. Folia opposita, breviter petiolata, oblanceolata, plana, integerrima; stipulæ parvæ, subulatæ, scariosæ. Flores minuti, in axillis ramulorum solitarii v. in cymulas paucifloras terminales dispositi, sessiles.

Species 1, Americæ boreali-orientalis incola. *A. Gray, Gen. Ill. t.* 103.

9. **Anychia,** *Rich. in Mich. Fl. Bor. Am.* i. 112, *pro parte.*—Flores bracteis parvis scariosis involucrati. Perianthium herbaceum, post anthesin vix induratum, 5-partitum; segmenta oblonga, planiuscula, apicibus subcucullatis dorso muticis v. subcorniculatis. Stamina 2–5, basi segmentorum inserta, filamentis filiformibus; antheræ didymæ; staminodia 0. Ovarium subglobosum, compressum; styli 2, breves, recurvi, intus stigmatosi; ovulum basilare, amphitropum, funiculo brevi. Utriculus membranaceus, subglobosus, compressus, perianthium excedens. Semen suberectum, reniformi-rotundatum, compressum, testa lævi brunnea; embryo annularis, albumen farinaceum cingens, cotyledonibus linearibus decurvis, radicula elongata hilum subbasilare spectante.—Herbæ annuæ,

erectæ v. diffusæ, glaberrimæ, dichotome ramosæ, ramis capillaribus. Folia opposita, brevissime petiolata, obovata oblonga v. lanceolata, subacuta, integerrima, plana ; stipulæ minutæ, scariosæ. Flores minuti, axillares, solitarii fasciculati v. cymosi, brevissime pedicellati.

Species 2, Americæ boreali-orientalis incolæ. *DC. Prod.* iii. 369. *Torr. et Gr. Fl. N. Amer.* i. 172. *A. Gray, Gen. Ill. t.* 104. *Gærtn. Fruct. t.* 128 (*Queria*). *Orteg. dec. t.* 15 *f.* 2 (*Queria*).

10. **Corrigiola,** *Linn. Gen. n.* 378.—Flores pedicellati, minute bracteati et 2-bracteolati. Perianthium herbaceum, 5-partitum ; segmenta oblonga, obtusa, mutica, marginibus membranaceis. Stamina 5, perigyna, filamentis filiformibus ; antheræ oblongæ ; staminodia 5, squamæformia, staminibus alterna. Ovarium ovoideum ; stylus brevissimus, 3-partitus, segmentis teretiusculis recurvis ; ovulum funiculo basilari suspensum, amphitropum. Fructus crustaceus, globoso- v. ovoideo-trigonus, perianthio inclusus. Semen ovoideo-globosum, ab apice funiculi suspensum, testa membranacea ; embryo annularis, albumen copiosum cingens, cotyledonibus angustis, radicula elongata supera. —Herbæ annuæ v. perennes, rarius basi frutescentes, glabræ, diffuse ramosæ ramulis gracilibus, v. ramis simpliciusculis e caudice crasso apice dense squamato undique patentibus. Folia opposita et alterna, sessilia v. breviter petiolata, oblonga lanceolata spathulata v. linearia, integerrima, plana, interdum carnosula v. glauca ; stipulæ variæ, scariosæ. Flores minuti, in cymas glomerulosve axillares et terminales dispositi, breviter pedicellati, pedicellis basi scarioso-bracteolatis.

Species 4–6, Europæ mediæ, regionis Mediterraneæ, Africæ borealis et australis, et Americæ australis temperatæ incolæ. *DC. Prod.* iii. 366. *Walp. Rep.* i. 260 ; *Ann.* ii. 89. *Gærtn. Fruct. t.* 75. *Lam. Illustr. t.* 213. *Sibth. Fl. Gr. t.* 292. *St. Hil. in Mém. Mus. Par.* ii. *t.* 4, *f.* 22. *Schkuhr Handb. t.* 85. *Reichb. Iconogr. Eur. t.* 161.

11. **Gymnocarpos,** *Forsk. Fl. Æg. Arab.* 65 ; *Ic. t.* 10.—Flores bracteis scariosis non involucrati. Perianthium herbaceum, demum induratum, 5-lobum, tubo brevi, fauce disco tenui annulari instructa ; lobi patentes, lineari-oblongi, coriacei, dorso infra apicem mucronati. Stamina 5, alte perigyna, cum staminodiis totidem subulatis alternantia, filamentis subulatis ; antheræ late oblongæ. Ovarium ovoideum, tubo calycis cohærens, in stylum elongatum attenuatum, stigmatibus 3 brevibus ; ovulum campylotropum, funiculo basilari longiusculo suspensum. Utriculus membranaceus, demum basi ruptus, tubo calycis inclusus. Semen ab apice funiculi suspensum, inversum, reniformi-oblongum, compressum, testa lævi membranacea ; embryo hippocrepicus, albumen farinaceum cingens, cotyledonibus angustis planiusculis, radicula brevi supera subacuta.—Fruticulus rigidus, salsoloideus, suberectus v. diffusus, caule crasso torto, ramulis intricatis nodosis albidis. Folia opposita v. in axillis fasciculata, sessilia, lineari-spathulata, mucronulata, integerrima, crassa ; stipulæ breves, triangulares, hyalinæ. Flores parvi, in cymas breves dichotomas terminales congesti, subsessiles, pedicellis clavatis compressis bracteatis.

Species 1, Africæ borealis et Mediterraneæ et Orientis ab ins. Canariensibus usque ad Scind incola. *DC. Prod.* iii. 369. *Webb, Phytogr. Canar.* i. 165. *Viv. Fl. Lib.* 13, *t.* 10, *f.* 1.

12. **Sclerocephalus,** *Boiss. Diagn.* iii. 12 ; *Fl. Or.* i. 748.—Flores capitati, capitulis foliis floralibus demum spinescentibus bracteisque membranaceis involucrati. Perianthium herbaceum, 5-fidum, tubo cupulari foliis floralibus bracteisque concreto, fauce disco tenui instructa ; lobi herbacei, lanceolati, sub apice spinosi. Stamina 5, ore perianthii inserta, filamentis brevissimis ; antheræ didymæ ; staminodia 0. Ovarium ovoideum, tubo perianthii longe adnatum, tenuiter membranaceum, apice liberum et in stylum capillarem attenuatum, stigmatibus 2 parvis recurvis ; ovulum ab apice funiculi basilaris plani elongati pendulum, amphitropum. Utriculus tenuissime membranaceus, tubo perianthii indurati adnatus, apice libero irregulariter lacero. Semen reniformi-rotundatum, ab apice funiculi pendulum, subcompressum, testa membranacea ; embryo annularis, albumen

farinaceum cingens, cotyledonibus compressis, radicula supera.—Herba annua, humilis, rigida, diffuse dichotome ramosa, ramulis crassiusculis nodosis. Folia opposita, carnosula, linearia, integerrima; stipulæ scariosæ. Capitula sphærica, 4–7-flora, fructifera erinacea, cum pedunculo brevissimo articulato decidua.

Species 1, Africæ borealis et Asiæ occidentalis ab ins. Capitis Viridis usque ad Persiam incola.

TRIBUS III. PTERANTHEÆ.

13. **Pteranthus,** *Forsk. Fl. Æg. Arab.* 36. (Louichea, *L'Hér. Stirp. Nov.* i. 135, *t.* 65.) —Flores ad apicem pedunculi foliacei cavi obcordati 3-ni, medius perfectus, laterales sæpius imperfecti, foliis floralibus pinnatipartitis involucrati. Perianthium herbaceum, compressum, 4-partitum; segmenta erecta, lineari-oblonga, rigida, 2 exterioribus dorso carinatis et superne ala spinulosa instructis, interioribus minoribus carinatis spinoso-mucronatis. Stamina 4, subhypogyna, filamentis filiformibus basi in cupulam connatis; antheræ oblongæ; staminodia 0. Ovarium obovoideum, in stylum filiformem attenuatum, stigmatibus 2 brevibus; ovulum erectum, semi-anatropum, funiculo brevi. Utriculus perianthio inclusus, obovoideus, subcompressus, tenuissime membranaceus. Semen obovoideum v. clavatum, erectum, testa membranacea, chalaza magna laterali; embryo magnus, lateralis, albumini parco applicitus, cotyledonibus oblongis plano-convexis, radicula infera.—Herba humilis, annua, carnosa, glabra, di-trichotome ramosa, ramis rigidis. Folia opposita et pseudo-verticillata, linearia, obtusiuscula, carnosula; stipulæ minutæ. Flores virides, bracteolis scariosis.

Species 1, Africæ borealis, ins. Cypri, Arabiæ, Syriæ et Persiæ australis, incola. *Boiss. Fl. Or.* i. 752. *Gærtn. f. Fruct.* iii. *t.* 213. *Lam. Illustr. t.* 764. *Sibth. Fl. Græc. t.* 153 (*Camphorosma*).

14. **Cometes,** *Linn. Mant.* 4, *n.* 1243. (Saltia, *R. Br. in Salt. Abyss.* 376. Ceratonychia, *Edgw. in Journ. As. Soc. Beng.* xvi. 1215.)—Flores ad apicem pedunculi communis 3-ni, medius perfectus, laterales imperfecti, foliis floralibus plumoso-multipartitis demum longissimis et squarroso-divaricatis involucrati. Perianthium herbaceum, 5-partitum; segmenta erecta, lineari-oblonga, dorso sub apice aristata, marginibus membranaceis. Stamina 5, subhypogyna, staminodiis totidem petaloideis alternantia, filamentis subulatis basi in cupulam connatis; antheræ didymæ. Ovarium ovoideo-lanceolatum, in stylum filiformem curvum attenuatum, stigmatibus 3 minutis; ovulum erectum, semi-anatropum, funiculo brevi. Utriculus perianthio inclusus, obovoideus, tenuiter membranaceus. Semen obovoideum, erectum, testa membranacea, chalaza magna laterali; embryo magnus, dorsalis, albumini parco applicitus, cotyledonibus oblongis plano-convexis, radicula infera.—Herbæ humiles, annuæ, pubescentes v. scabridæ, multicaules, dichotome ramosæ. Folia opposita v. pseudo-verticillata, sessilia v. in petiolum angustata, elliptica lanceolata v. linearia, aristato-acuminata, integerrima; stipulæ minutæ, setaceæ. Flores sessiles, cum pedunculo immutato terminali decidui, involucris setosis ferrugineis; pedunculi solitarii v. cymoso-paniculati, fructiferi cum bracteis in capitula coadunati. Semina 2 v. 3, in fasciculo germinantia.

Species 2, Africæ boreali-orientalis, Orientis et Indiæ maxime occidentalis incolæ. *Boiss. Fl. Or.* i. 752. *Burm. Fl. Ind. t.* 16. *Wall. Pl. As. Rar.* i. *t.* 17, 18. *Wight Ic. t.* 1785.

15. **Dicheranthus,** *Webb in Ann. Sc. Nat. ser.* 3, v. 27, *t.* 2.—Flores ad apicem pedunculi communis 3-ni, medius perfectus, laterales ♂ v. deformati, bracteis rigidis mucronatis stipati. Perianthium herbaceum, 5-partitum; segmenta lineari-oblonga, late scariosa, erecta, apicibus aristato-acuminatis patentibus; florum lateralium segmenta varia, sæpius inæqualia, obtusa aristata v. in appendicem orbicularem producta. Stamina 2–3, hypogyna, filamentis filiformi-subulatis; antheræ lineari-oblongæ; staminodia 0. Ovarium ellipsoideum, 3-gonum, in stylum strictum filiformem attenuatum, stigmatibus 3 minutis; ovulum erectum, semi-anatropum, funiculo basilari. Utriculus

oblongo-cylindraceus, tenuissime membranaceus. Semen clavatum, testa hyalina pericarpio et albumini parco adhærente, chalaza supra basin parva laterali; embryo magnus, fere rectus, dorsalis, clavatus, cotyledonibus oblongis plano-concavis, radicula infera conica.—Fruticulus 3–4-pedalis, glaberrimus, ramulis gracilibus teretibus pendulis. Folia opposita, elongata, cylindracea, carnosula, obtusa v. acuta, ima basi scarioso-dilatata et per paria connata; stipulæ minutæ, scariosæ, v. 0. Flores parvuli, in cymas dichotomas terminales fastigiatim paniculatas dispositi, pedunculis pedicellisque gracilibus.

Species 1, Canariensis, *Walp. Ann.* i. 81.

TRIBUS IV. SCLERANTHEÆ.

16. **Scleranthus,** *Linn. Gen. n.* 562.—Flores ebracteati. Perianthium herbaceum, infundibulare urceolatum v. turbinatum, 4–5-dentatum v. -lobum, demum induratum; lobi erecti, acuti v. obtusi. Stamina 1, 2, 5, v. 10, fauci perianthii inserta, filamentis subulatis; antheræ didymæ; staminodia 0. Ovarium ovoideum; styli 2, distincti, filiformes, erecti, stigmatibus capitellatis v. acutis; ovulum ab apice funiculi basilaris filiformis pendulum, amphitropum. Utriculus membranaceus, perianthii tubo indurato inclusus. Semen lenticulare, ab apice funiculi suspensum, inversum, testa coriacea lævi; embryo annularis, albumen farinaceum cingens, cotyledonibus linearibus, radicula elongata supera.—Herbæ humiles, rigidæ, annuæ v. perennes, dichotome ramosissimæ, sæpius dense cæspitosæ, glabræ v. puberulæ. Folia opposita, basi connata, subulata, rigida, pungentia, marginibus lævibus v. serrulatis; stipulæ 0. Flores parvuli, virides, in cymas glomerulosve axillares et terminales sessiles v. pedunculatos dispositi, v. ad apicem pedunculi rigidi 1–3-ni involucrati.

Species ad 10, Europæ, Africæ totæ, Asiæ occidentalis et Australasiæ incolæ. *DC. Prod.* iii. 378. *Walp. Rep.* i. 266. *Boiss. Fl. Or.* i. 749. *Benth. Fl. Austral.* v. 258. *Gærtn. Fruct.* ii. *t.* 126. *Lam. Illustr. t.* 374. *Nees Gen. Fl. Germ.* (*male quoad ovarium*). *A. Gray, Gen. Ill. t.* 102.

MNIARUM, *Forst. Char. Gen.* i. *t.* 1 (DITOCA, *Banks et Sol. in Gærtn. Fruct.* ii. 196, *t.* 126) a *Scleranthis* typicis non differt nisi floribus 1–2-andris ad apicem pedunculi demum elongati apice 4-bracteati sessilibus. *DC. Prod.* iii. 378. *Labill. Pl. Nov. Holl. t.* 2. *Hook. Ic. Pl. t.* 283. *F. Muell. Pl. Vict. t.* 12.

17. **Habrosia,** *Fenzl in Bot. Zeit.* 1843, 322.—Perianthium herbaceum, fere 5-partitum, tubo obconico demum gibbis 5 sinubus oppositis instructum; segmenta erecto-patentia, late scariosa, oblonga, in aristam elongatam abrupte angustata. Stamina 5, minima, hypogyna, inæquilonga, filamentis brevibus v. brevissimis subulatis, antheræ didymæ; staminodia minuta, hyalina, squamæformia. Ovarium minutum, compressum, orbiculare; styli 2, breves, suberecti, intus stigmatosi; ovula 2, basilaria, semi-anatropa, funiculis subelongatis. Utriculus membranaceus, globosus, compressus, asperulus. Semen lenticulare, testa membranacea pericarpio adhærente, hilo laterali; embryo annularis, albumen farinaceum cingens, cotyledonibus linearibus, radicula dorsali.—Herba annua, tenuissima, glaberrima, dichotome ramosa. Folia opposita, setacea, obtusa, basibus dilatatis connata; stipulæ 0. Flores parvuli, in cymas multifloras fastigiatim dispositi, virides, bracteati, pedicellati.

Species 1, Mesopotamica et Syriaca. *Boiss. Fl. Or.* i. 751. Genus anomalum, habitu *Scleranthi* v. *Arenariæ*, sed 2-ovulatum.

ORDO CXXX. AMARANTACEÆ.

Endl. Gen. 300. Lindl. Veg. Kingd. 510. Mart. in Nov. Act. Acad. Nat. Cur. xiii. 209.

Flores hermaphroditi, rarius polygamo-monoici v. dioici, glomerati capitati v. spicati, sæpissime scarioso-bracteati et 2-bracteolati. *Perianthium* siccum, scariosum hyalinum v. chartaceum, rarissime herbaceum, 4–5-partitum; segmenta libera v. basi connata, sæpissime erecta, æqualia v. 2–3 interiora minora, glabra pubescentia v. (interdum longissime) sericea v. villosa, imbricata, duobus exterioribus. *Stamina* 1–5, hypogyna, v. basi segmentorum perianthii inserta, semper iisdem opposita, inclusa v. rarius exserta; filamenta basi v. altius in cupulam v. tubum brevem v. elongatum membranaceum interdum intus antheriferum connata, dein subulata et compressa v. rarius linearia; sinubus acutis v. obtusis nudis v. laciniis (staminodiis) triangularibus quadratis v. oblongis nudis v. fimbriato-laceris interpositis; rarissime filamenta basi libera. *Antheræ* medio dorso affixæ, breves et didymæ v. elongatæ, 1–2-loculares, rimis introrsum dehiscentibus; pollen minutissimum, globosum. *Ovarium* ovoideum ellipsoideum v. globosum, sæpe compressum, rarissime obliquum v. obcordatum, semper liberum, interdum substipitatum, membranaceum rarissime coriaceum v. carnosulum, 1-loculare, vertice non raro indurato. *Stylus* elongatus brevis v. 0, simplex stigmate capitellato v. simplici, v. 2–3-fidus stigmatibus acutis, v. stigmata 2–3 intus papillosa, recurva v. erecta. *Ovula* solitaria v. plura, amphitropa, erecta v. ab apice funiculi elongati suspensa, funiculis liberis distinctis ima basi ovarii insertis, brevibus v. elongatis. *Fructus*, utriculus membranaceus rarius bacca carnosa, evalvis et irregulariter ruptus v. circumscissus. *Semina* inversa v. erecta, lenticularia, oblonga v. reniformi-orbiculata, compressa v. rarius turgida, umbilico nudo v. rarius arillato; testa crustacea v. coriacea, non raro atra v. brunnea, sæpius nitida, lævis punctulata v. rarius granulata; albumen farinaceum, copiosum, endopleuræ membranaceæ sæpe adhærens. *Embryo* annularis, periphericus, gracilis, cotyledonibus incumbentibus angustis, radicula elongata supera v. infera, rarius embryo periphericus, cotyledonibus latis tenuibus concavis exteriore interiorem angustiorem subinvolvente, radicula erecta.

Herbæ v. suffrutices, rarissime arbusculæ, erecti v. rarius ramulis sarmentosis scandentes, rarissime volubiles? Folia opposita et alterna, membranacea, carnosula v. coriacea, simplicia, integra sæpissimeque integerrima. Inflorescentia varia, spicata capitata v. rarius racemosa, primaria nempe centripeta, ultima ad normam cymosa sed sæpius ad flores 3 v. unicum reducta. Bracteæ et bracteolæ sæpissime hyalinæ, nunquam foliaceæ. Flores parvi v. inter minores, interdum minuti, albi virides v. flavi, rarissime læte colorati, interdum intra bracteolas 2–5-ni, 1 v. 2 fertiles, ceteri steriles perianthii segmentis et bracteolis in aristas apice rectas uncinatas v. glochidiatas glabras v. longissime sericeo-barbatas mutatis. Utriculus fere semper inter perianthii segmenta erecta imbricata inclusus v. involutus.

Species ad 480, regionibus frigidis exceptis in utroque orbe late dispersæ.

Ordo *Chenopodiaceis* et *Illecebraceis* proximus: a priore habitu, floribus constanter bracteatis et 2-bracteolatis, perianthio sæpe scarioso, et filamentis basi in cupulam v. in tubum membranaceum coalitis distinctus. *Illecebraceæ* distinguuntur foliis sæpissime stipulatis, perianthio magis coriaceo, staminibus perigynis et embryone sæpius dorsali. Tribus *Polycnemearum*, quæ fere æquo jure *Chenopodiaceas* et *Amarantaceas* refert, a nobis inter priores collocetur ob habitum et perianthia coriacea.

FORMÆ ABNORMES.

Perianthium 0 in floribus ♀ *Acnidæ* et *Acanthochitonis*.
Stamina perigyna in *Guilleminea*, 10–20 in *Achatocarpo*.
Fructus nuceus in *Digera*.

CONSPECTUS GENERUM.

Tribus I. Celosieæ. Antheræ 2-loculares. Ovarium 2–∞-ovulatum. Folia alterna.

* *Fructus baccatus, perianthio stellatim patente stipatus.*

1. Deeringia. Flores racemosi.—*Asia et Afric. trop., Australia.*

2. Melanocarpum. Flores paniculati.—*Amer. trop.*

** *Utriculus membranaceus, perianthio erecto stipatus v. inclusus.*

3. Henonia. Filamenta basi connata. Utriculus demum longitudinaliter fissus.—*Madagascar.*

4. Celosia. Filamenta basi connata. Utriculus circumscissus.—*Orbis uterque intertrop.*

5. Hermbstædtia. Filamenta alte connata. Utriculus circumscissus.—*Afric. trop. et austr.*

Tribus II. Amaranteæ. Antheræ 2-loculares. Ovarium 1-ovulatum.

Subtribus 1. Euamaranteæ. *Ovulum erectum, funiculo brevi. Radicula infera. Folia alterna.*

* *Flores hermaphroditi v. dioici. Perianthii segmenta sub fructu stellatim patentia.*

6. Rodetia. Flores 2–4-bracteolati. Frutex.—*Himalaya.*

7. Bosia. Flores 2-bracteolati, *dioici.* Frutex.—*Ins. Canar.*

** *Flores hermaphroditi. Perianthii segmenta in fructu erecta.*

8. Achatocarpus. Flores racemosi. *Stamina* 10–20. Stigmata 2. Bacca globosa.—*Amer. trop.*

9. Charpentiera. Flores paniculatim spicati. Stigmata 2. Utriculus coriaceus, compressus, indehiscens. Arillus 0. Arbuscula.—*Ins. Sandvicens.*

10. Banalia. Flores paniculatim spicati. Stigmata 2. Utriculus membranaceus, indehiscens. Arillus 0. Herba scandens?—*Penins. Ind. or.*

11. Chamissoa. Flores paniculatim spicati. Stigmata 2. Utriculus circumscissus. Semen arillatum. Herbæ sæpius scandentes.—*Amer. trop.*

12. Allmania. Flores capitati. Stigma capitatum. Utriculus circumscissus. Semen arillatum. Herbæ.—*As. trop.*

13. Digera. Flores spicati. Stigma 2-fidum. Nux crustacea. Herbæ.—*Asia et Afric. trop.*

*** *Flores unisexuales. Perianthii segmenta in fructu erecta.*

14. Amarantus. Flores sæpissime monoici. Utriculus varius.—*Reg. trop. et calid.*

15. Acnida. Flores dioici, bracteis parvis. Utriculus indehiscens.—*Amer. bor., Ind. occ.*

16. Acanthochiton. Flores dioici, ♀ bracteis amplis cordatis complicatis inclusi. Utriculus circumscissus.—*Texas, Arizona.*

Subtribus 2. Achyrantheæ. *Ovulum ab apice funiculi elongati suspensum. Utriculus indehiscens. Semen inversum, radicula ascendente v. supera.*

* *Flores dioici, ♂ sub quaque bractea solitarii, ♀ basi utrinque flore sterili in appendicem ramosam sericeo-barbatam mutato stipati.*

17. Saltia. Ovarium glabrum. Folia alterna.—*Arabia.*

** *Flores hermaphroditi, 1–3 sub quaque bractea perfecti, aliis deformatis stipati.*

18. Sericocoma. Florum imperfectorum segmenta in spinas simplices v. ramosas longe sericeas mutata. Ovarium lanatum. Folia opposita et alterna.—*Afric. aust.*

19. Centema. Florum imperfectorum segmenta in spinas validas simplices basi incrassatas cum basi florum ☿ concretas mutata. Ovarium glabrum v. puberulum. Folia opposita.—*Afric. trop.*

20. Cyathula. Florum imperfectorum segmenta in aristas apice uncinatas mutata. Laciniæ filamentis interpositæ. Folia opposita.—*Reg. trop.*

21. Pupalia. Florum imperfectorum segmenta in aristulas stipitatas stellatim patentes apice uncinatas mutata. Laciniæ inter filamenta 0. Folia opposita.—*Asia et Afric. trop.*

*** *Flores hermaphroditi sub quaque bractea solitarii, 2-bracteolati.*

† *Laciniæ anantheræ inter filamenta* 0, Trichiniis *paucis exceptis.*

22. Psilotrichum. Perianthii segmenta exteriora grosse 3-costata. Herbæ v. fruticuli foliis oppositis spicis axillaribus densifloris.—*Asia et Afric. trop., Ins. Sandv.*

23. Psilostachys. Perianthii segmenta exteriora grosse 3-costata. Herbæ foliis oppositis. spicis in paniculas amplas terminales capillares laxifloras dispositi.—*Afric. orient.*, *Arabia*, *Ind. or.*

24. Ptilotus. Perianthii segmenta libera, hyalina. Folia alterna.—*Australia.*

25. Trichinium. Perianthii segmenta basi connata. Filamenta 1-3 sæpius ananthera. Folia alterna.—*Australia.*

26. Chionothrix. Perianthii segmenta dura, pilis sericeis ornata. Filamenta late linearia, in tubum elongatum connata. Frutex foliis oppositis, spicis elongatis cernuis.—*Afric. aust.*

27. Nothærua. Perianthii segmenta 4, hyalina. *Stamina* 1–2. Herbæ foliis oppositis.—*Asia et Afric. trop.*

†† *Laciniæ anantheræ filamentis interpositæ.*

28. Ærua. Perianthii segmenta hyalina, lanata. Laciniæ filamentis interpositæ breves. Herbæ v. fruticuli lanati, foliis oppositis et alternis.—*Asia*, *Afric.*, *Austral.*

29. Calicorema. Perianthii segmenta dura, pilis sericeis onusta. Filamenta in tubum elongatum connata. Frutex foliis oppositis subcylindraceis.—*Afric. aust.*

30. Stilbanthus. Perianthii segmenta scariosa, nitida, apicibus lanatis. Arbor scandens, foliis oppositis.—*Himal. orient.*

31. Achyranthes. Perianthii post anthesin deflexi segmenta bracteolæque spinescentia. Herbæ v. fruticuli, foliis oppositis, floribus longe spicatis.—*Reg. trop. et subtrop.*

32. Pandiaka. Perianthii post anthesin erecti v. patentis segmenta bracteolæque spinescentia, spinis erectis. Herbæ foliis oppositis, floribus capitatis v. breviter spicatis.—*Afric. trop.*

33. Achyropsis. Perianthii chartacei segmenta obtusa, glabra, nitida. Herbæ v. fruticuli foliis oppositis v. fasciculatis, floribus spicatis.—*Afric. aust.*

34. Nyssanthes. Perianthii rigidi segmenta 4, 2 exteriora v. omnia bracteolæque aciculari-spinescentia, divaricatissima. Herbæ foliis oppositis, floribus paucis axillaribus.—*Australia.*

Tribus III. Gomphreneæ. Antheræ 1-loculares. Ovarium 1-ovulatum, ovulo ab apice funiculi elongati suspensum. Folia sæpius opposita, *Dicrauro* excepto.

Genera inter se difficillime limitibus certis separanda. Characteres fere omnium hinc inde in specie una alterave *Gomphrenæ* ipsius repetiti, et in plerisque, monotypicis exceptis, speciem unam alteramve invenires æquo fere jure ad genus alium referendam.

* *Stamina perigyna. Flores capitati.*

35. Guilleminea. Stamina fauci tubi perianthii inserta.—*Amer. calid.*, *Andes.*

** *Stamina hypogyna. Flores minuti, axillares, congesti, nec capitati.*

36. Cladothrix. Fruticulus stellato-tomentosus, niveus. Stigma capitatum.—*Amer. bor. reg. calid. occid. et interior.*

(Vide quoque 41, Gossypianthum.)

*** *Stamina hypogyna. Flores capitati v. spicati, axillares et terminales, rarius paniculati.*

† *Stigma sæpissime simplex, capitatum v. emarginatum v. rarissime stigmata 2, subulata.*

37. Pfaffia. Perianthium inter bracteolas sessile, pilis onustum. Tubus stamineus 5-fidus, laciniis antheriferis linearibus ciliatis, anantheris interpositis 0. Stigma sessile.—*Amer. trop. et subtrop.*

38. Mogiphanes. Perianthium inter bracteolas breviter stipitatum. Tubi staminei laciniæ antheriferæ 5 subulatæ, anantheris interpositis totidem apice laceris. Stylus manifestus. —*Amer. trop.*

39. Telanthera. Perianthium intra bracteolas sessile, a dorso sæpissime valde compressum. Tubus stamineus brevis v. elongatus, laciniis antheriferis 5 subulatis, anantheris interpositis totidem laceris. Stylus manifestus, stigmate capitato.—*Amer. trop. et subtrop.*, *Afric. trop. occid.*

40. Alternanthera. Flores capitati. Perianthium intra bracteolas sessile, a dorso valde compressum. Tubus stamineus ovario brevior, laciniis antheriferis 1–5 subulatis, anantheris

interpositis 0 v. brevissimis, v. filamenta 1–3 sublibera. Ovarium orbiculare v. obreniforme, valde compressum. Stigma sessile, sæpissime integrum.—*Utriusque orbis reg. calid.*

41. Gossypianthus. Flores congesti nec capitati. Perianthium dense lanatum, teres, hyalinum. Tubi staminei laciniæ antheriferæ 5, subulatæ, anantheris interpositis 0. Ovarium ovoideum, stigmate subsessili emarginato.—*Amer. bor. prov. Texas et Nov. Mexico.*

(Vide etiam 45, Frœlichiam, stigmate capitato.)

†† *Stigmata 2, subulata v. filiformia* (Frœlichia *excepta*). *Tubi staminei laciniæ anantheræ nullæ antheriferis interpositæ.*

42. Wœhleria. Perianthium nudum, teres, segmentis 4. Stamen 1, filamento dilatato. Stylus 0.—*Cuba.*

43. Philoxerus. Perianthium sæpius nudum, compressum, intra bracteolas stipitatum, v. basi elongatum valdeque incrassatum. Tubus stamineus brevis, laciniis antheriferis subulatis. Stylus manifestus.—*Amer. trop. or., Afr. trop. occid., Australia, ins. Loo Choo.*

44. Gomphrena. Perianthium sæpissime sericeum v. lanatum, segmentis liberis v. basi connatis. Tubus stamineus elongatus, laciniis antheriferis 5 sæpissime linearibus apice 2-cruribus. Stylus elongatus v. brevis, stigmatibus brevibus v. elongatis.—*Amer. trop. et subtrop. Australia, una sp. Afr. et Asiat.*

45. Frœlichia. Perianthii lanati *tubus 5-fidus, fructifer cristatus v. alatus.* Tubus stamineus elongatus, laciniis antheriferis 5. Stylus elongatus v. 0; stigma capitatum.—*Amer. trop. et subtrop.*

**** *Stamina hypogyna. Flores sæpissime minuti in glomerulos v. spiculas secus ramos sæpissime oppositos v. verticillatos elongatos paniculæ amplæ sparsi, longe lanati v. sericei* (*rarissime nudiusculi*). (Capitula majuscula pedunculata paniculata in *Hebanthis* paucis.)

46. Hebanthe. Stigma capitatum, simplex 2-lobum v. 2-crure. Semen subglobosum, cotyledonibus latis concavis. Frutices sæpe scandentes, foliis oppositis.—*Amer. trop.*

47. Iresine. Stigmata 2, subulata. Semen lenticulare v. reniforme compressum, cotyledonibus angustis.—Herbæ v. frutices erectæ v. scandentes, foliis oppositis.—*Amer. trop. et subtrop.*

48. Dicraurus. Stigmata 2, sessilia, subulata. Semen subglobosum, cotyledonibus latis concavis. Fruticulus foliis alternis.—*Texas.*

GENERA EXCLUSA V. DUBIA.

Acroglochin, Schrad., Corispermum, Juss., Hablitzia, Bieb., Hemichroa, R. Br., Nitrophila, S. Wats., et Polycnemum, Linn., infra ad **Chenopodiaceas** referentur.

Lachnostachys, Hook., est **Verbenacea,** supra, ii. 1139.

Blepharolepis, Nees, est *Polpoda*, Presl, inter **Ficoideas,** supra, i. 858.

Polychroa, Lour., infra ad *Pellionium* inter **Urticeas** refertur.

Trypherа, Blume, Bijdr. 549, est *Mollugo Glinus*, Linn., genus supra i. 857 sub **Ficoideis** recensitum.

Pleuropetalum, Hook. f. (Allochlamys, Moq.), genus Galapagense ab Endlichero ad *Amarantaceas* relatum, supra i. 157 sub **Portulaceis** invenitur.

Lenzia, Philippi in Linnæa xxxiii. 222, ex Andibus Chilensibus propè Coquimbo, genus imperfecte descriptum, plantula foliis confertissimis erectis *Pini* cujusdam rami apici similis, nobis ignotum est, et locus in ordine omnino dubius, quamvis ab auctore prope *Æruam* collocatur.

Phyllepidum, Raf. in Med. Repos. ex char. gallice reddito in Desv. Journ. Bot. i. 218 est planta boreali-Americana e vicinibus Baltimore, ab auctore ad *Amarantaceas* relata et verisimiliter jam sub alio nomine edita, sed ex charactere pessimo nequaquam recognoscenda.

Tribus I. Celosieæ.

1. **Deeringia,** *R. Br. Prod.* 413. (Coilosperma, *Raf. ex Moq.* Cladostachys, *Don, Prod. Fl. Nep.* 76, *excl. syn.*)—Flores hermaphroditi v. dioici, bracteati et 2-bracteolati. Perianthii membranacei v. herbacei segmenta 5, æqualia v. interiora minora, medio subherbacea, fructifera patentia. Stamina 4–5, filamentis basi in cupulam connatis; antheræ late oblongæ, 2-loculares. Ovarium ovoideum v. subglobosum, sessile v. substipitatum; stigmata 2–4, subulata, basi connata, undique papillosa v. minuta sessilia

capitellata; ovula pauca v. plurima, funiculis elongatis affixa. Fructus v. bacca irregulariter rupta v. utriculus circumscissus, globosus, basi perianthii explanata stipatus, integer v. obscure lobatus, polyspermus. Semina pauca v. numerosa, reniformia, compressa, rostellata, testa crustacea atra nitida punctulata, arillo 0; embryo annularis, albumen farinaceum cingens, cotyledonibus linearibus plano-convexis, radicula descendente.—Herbæ v. suffructices sarmentosæ v. alte scandentes, glabræ v. foliis subtus pubescentibus. Folia alterna, petiolata, ovata, acuminata, integerrima. Flores parvi, in spicas racemosve axillares et terminales simplices v. paniculatim ramosas dispositi, rarissime pauci fasciculati; bracteis bracteolisque scariosis.

Species 5–6, Indiæ borealis, Asiæ et Africæ tropicæ, Novæ Caledoniæ, et Australiæ orientalis incolæ. *Moq. in DC. Prod.* xiii. ii. 236. *Benth. Fl. Austral.* v. 209. *Bot. Mag. t.* 2717. *Endl. Iconogr. t.* 62. *Wight Ic. t.* 728, 729.

Deeringiæ affinis est planta Javanica ab Horsfieldio lecta, foliis ovato-lanceolatis, spicis brevibus simplicibus axillaribus, ovario in stylum brevem attenuato, stigmate capitato. In specie Madagascariensi (*Perville*, No. 674) utriculus depresso-sphericus circumscissus, stigmatibus sessilibus capitellatis.

2. **Melanocarpum,** *Hook f. gen. nov.*—Flores hermaphroditi, bracteati et 2-bracteolati. Perianthii coriaceo-scariosi segmenta æqualia, oblonga, obtusa, concava, striato-nervosa, fructifera stellatim patentia. Stamina 5, filamentis subulato-filiformibus basi in cupulam crassiusculam connatis; antheræ didymæ, 2-loculares. Ovarium globoso-ovoideum, in stylum brevem attenuatum, stigmatibus 2–3 brevibus subulatis erectis patentibus; ovula plurima, funiculis capillaribus. Fructus globosus, baccatus, irregulariter ruptus, polyspermus. Semina reniformia, lenticularia, erecta, funiculo elongato, testa atra nitida lævi, arillo 0; embryo periphericus, albumen granulosum cingens, cotyledonibus linearibus, radicula descendente.—Arbuscula subramosa, glabra, exsiccata fuscescens, ramulis teretibus. Folia alterna, majuscula, membranacea, elliptico-lanceolata, longe acuminata, integerrima v. marginibus subundulatis, basi in petiolum longiusculum angustata, nervis arcuatis. Flores parvi, in paniculas ramosas terminales dispositi, sessiles v. pedicellati, virescentes, demum rubri, pedicellis basi bracteatis, bracteis bracteolisque membranaceis. Fructus pisiformis, niger.

Species 1, *C. Sprucei*, Hook f. (Ecuadoriæ ad pedem Chimborazo incola et? prope Vera Cruz Mexici, *Hahn*).

3. **Xenonia,** *Moq. in DC. Prod.* xiii. ii. 237.—Flores hermaphroditi, bracteati et 2-bracteolati. Perianthii scariosi segmenta 5, æqualia, oblonga, obtusa v. retusa, concava, fructifera erecta. Stamina 5, filamentis filiformibus ima basi connatis; antheræ didymæ, 2-loculares. Ovarium ovoideum; stylus brevis, stigmatibus 3 subulato-filiformibus revolutis papillosis; ovula numerosa, funiculis elongatis. Utriculus elongato-oblongus, e perianthio longe exsertus, scarioso-coriaceus, demum longitudinaliter ruptus, 1-∞-spermus. Semina oblique lenticularia, compressa, testa atra nitida lævi, arillo 0; embryo annularis, albumen farinaceum cingens, radicula infera.—Frutex gracillimus, erectus, ramosus, glaber, ramulis virgatis tenuibus teretibus strictis. Folia parva, alterna, linearia v. lineari-oblonga, obtusa, in petiolum vix angustata, integerrima, enervia. Flores minuti, in spiculas breves strictas secus ramulos aphyllos alternas laxe dispositi, albo-viriduli, bracteis bracteolisque concavis.

Species 1, Madagascariæ incola. Embryo a nobis non visus.

4. **Celosia,** *Linn. Gen. n.* 289. (Lophoxera et Sukana, *Raf. ex Moq.*)—Flores hermaphoditi, bracteati et 2-bracteolati. Perianthium scariosum, 5-partitum; segmenta oblonga v. lanceolata, obtusa v. acuta, striato-nervosa, fructifera erecta. Stamina 5, filamentis subulatis v. filiformibus, basi in cupulam membranaceam connatis; antheræ breves v. elongatæ, 2-loculares. Ovarium ovoideum subglobosum v. lagenæforme; stylus 0 v. brevis v. elongatus, interdum post anthesin elongatus, v. stigmatibus 2–3 subulatis; ovula 2 v. plura, funiculis elongatis. Utriculus perianthio inclusus v. exsertus,

ovoideus v. globosus, apice attenuato acuto v. obtuso interdum suberoso v. incrassato, circumscissus, rarissime indehiscens v. irregulariter ruptus, 2–∞-spermus. Semina sæpius erecta, lenticularia, testa crustacea atra lævi nitida ; embryo annularis, albumen farinaceum cingens, cotyledonibus linearibus, radicula infera v. ascendente.—Herbæ annuæ, rarius fruticuli v. frutices, glabræ v. pilosæ, interdum scandentes, ramulis teretibus v. angulatis. Folia alterna, in petiolum sæpius attenuata, linearia oblonga ovata v. obovata, integerrima v. in perpaucis lobata. Flores in spicas densifloras terminales et axillares dispositi, v. secus ramulos floriferos simplices v. ramosos fasciculati, sessiles v. breviter pedicellati, parvi v. majusculi, albi argentei v. rosei, nitidi.

Species ad 30, regionum calidarum Asiæ, Africæ et Americæ incolæ. *Moq. in DC. Prod.* xiii. ii. 237. *Walp. Ann.* iii. 299. *Griseb. Pl. Lorentz.* 31. *S. Wats. Bot. Calif.* ii. *ined.* *Gærtn. Fruct. t.* 128. *Lam. Illustr. t.* 168. *Jacq. Hort. Vind. t.* 98 ; iii. *t.* 15 ; *Ic. Rar. t.* 51, 339. *Wight, Ic. t.* 730, 1767, 1768. *Mart. Nov. Gen. et Sp. t.* 157, 158. *Bot. Reg. t.* 1834. *Andr. Bot. Rep. t.* 635. In *C. cymosa*, Seub. in Mart. Fl. Bras. v. i. 244, t. 75, flores inter bracteolas sæpe 3-ni, 2 laterales minuti imperfecti, intermedius perfectus.

Genus in sectiones sequentes cum iis Moquinii minime congruentes dividitur.

1. *Celosia.* Stylus brevis v. longiusculus, post anthesin non elongatus. Utriculus apice acutus v. attenuatus. Includit *C. paniculatam*, Linn., *C. trigynam*, Linn., *C. virgatam*, Jacq., *C. floribundam*, Moq., *C. laxam*, Schum. et Thonn., *C. leptostachyam*, Benth., *C. brasiliensem*, Moq., *C. grandifoliam*, Benth., et *C. spicatam*, Spr. Lestibudesia, *Thou. Hist. Veg. Iles Afr.* 53, *t.* 16 ; *Gen. Nov. Madag.* 5.

2. *Celosiastrum*, Moq. l.c. Stylus elongatus, filiformis, post anthesin elongatus, stigmate capitellato 3-lobo. Utriculus lagæniformis, apice attenuatus. Huc *C. argentea*, Linn., *C. cristata*, Linn., *C. cernua*, Roxb., aliæque.

3. *Acroporoides.* Stylus brevissimus v. 0, stigmatibus 2–3 subulatis recurvis. Utriculus apice obtusus incrassatus. Huc *C. pulchella*, Moq., *C. polygonoides*, Retz, *C. acroporoides*, Hochst., et *C. intermedia*, Hochst.

4. *Lagrezia.* Stylus brevis, stigmatibus recurvis. Utriculus rotundatus, compressus, 1–2-spermus, circumscissus v. irregulariter ruptus. Lagrezia, *Moq. in DC. Prod.* xiii. ii. 252 (excl. *L.? altissima*, quæ *Deeringiæ* species.) Species 3 Madagascarienses: 1. *C. phytolaccæfolia*, Juss. mss. (*Lagrezia madagascariensis*, Moq.), foliis ovato-lanceolatis, utriculo circumscisso; 2. *C. Boivinii*, Hook. f., foliis ovato- v. elliptico-oblongis, spicis gracillimis, utriculo irregulariter rupto; 3. *C. spathulata*, Boj. mss., foliis obovato-spathulatis in petiolum elongatum angustatis.

5. **Hermbstaedtia,** *Reichb. Consp.* 164. (Berzelia, *Mart. in Nov. Act. Nat. Cur.* xiii. 292, *non Brongn.* Langia, *Endl. Gen. Pl.* 304. Hyparete, *Raf. ex Moq.*)—Flores hermaphroditi, bracteati et 2-bracteolati. Perianthii scariosi segmenta 5, subæqualia, oblongo-lanceolata, acuta, striata, fructifera erecta. Stamina 5, filamentis in tubum membranaceum cylindraceum apice 10-fidum connatis ; antheræ lineari-oblongæ, in sinubus alternis tubi sessiles v. breviter stipitatæ, 2-loculares. Ovarium ovoideum, in stylum brevem v. subelongatum attenuatum, stigmatibus 3 dentiformibus v. subulatis undique papillosis ; ovula numerosa. Utriculus perianthio inclusus, membranaceus, ovoideus, circumscissus. Semina pauca v. numerosa, erecta, lenticularia, testa atra nitida crustacea, arillo 0 ; embryo annularis, albumen farinaceum cingens, radicula infera.—Herbæ v. suffrutices glabri v. puberuli, parce ramosi, ramis gracilibus teretibus v. angulatis sæpe glaucis. Folia sparsa, anguste linearia, acuta v. obtusa, integerrima. Flores in spicas simplices elongatas terminales dispositi, rarissime capitati, albi v. rosei, bracteis concoloribus.

Species 5, Africæ tropicæ et australis incolæ. *Moq. in DC. Prod.* xiii. ii. 246. *Wendl. Hort. Herrenh. t.* 2 (*Celosia*).

Tribus II. Amaranteæ.

6. **Rodetia,** *Moq. in DC. Prod.* xiii. ii. 323.—Flores hermaphroditi, bracteati et 2–4-bracteolati. Perianthium subherbaceum, 5-partitum, basi non induratum ; segmenta 5, subæqualia, breviter oblonga, obtusa, 3-nervia, glabra, sub fructu stellatim patentia. Stamina 5, filamentis lineari-subulatis demum elongatis basi in cupulam brevem connatis, laciniis interjectis minutis obtusis; antheræ exsertæ, oblongæ, basi longe 2-fidæ, 2-loculares.

Ovarium anguste ovoideum, in stylum brevem crassum attenuatum, stigmatibus 2–3 crassiusculis; ovulum 1, erectum, funiculo brevi. Bacca globosa, perianthio stellatim patente stipata, carnosa. Semen majusculum, erectum, subglobosum, testa tenuiter crustacea atra nitida, arillo 0; embryo annularis, albumen farinaceum cingens, cotyledonibus lineari-oblongis concavis exteriore majore radicula descendente latioribus.—Frutex glaberrimus, ramosus, habitu *Deeringiæ*, ramulis teretibus. Folia alterna, petiolata, ovata v. ovato-lanceolata, acuminata, integerrima. Flores axillares, spicati spicis paniculatis, parvi, virescentes. Bacca pisiformis.

Species 1, Himalaica.

7. **Bosia,** *Linn. Hort. Cliff.* 84; *Gen. n.* 315 (Bosea).—Flores dioici, bracteati et 2-bracteolati. Perianthium herbaceum, subglobosum, 5-partitum, basi non induratum; segmenta 5, subæqualia, concava, ovato-rotundata, obtusa, enervia, imbricata uno exteriore. Fl. ♂: Stamina 5, disco hypogyno obscure 5-crenato inserta, filamentis filiformi-subulatis; antheræ late ovatæ, 2-loculares, exsertæ, versatiles. Ovarii rudimentum pyramidatum. Fl. ♀: Staminodia 5, minuta. Discus 10-lobus, lobis per paria staminodiis alternis. Ovarium ovoideum, apice exsertum; stigmata 3, minuta, crasse subulata, recurva, intus papillosa; ovulum 1, funiculo brevi erectum, campylotropum, micropyle infera. Utriculus globosus, carnosus, basi perianthio bracteolisque stipatus. Semen erectum, subglobosum, ad hilum leviter emarginatum, testa brunnea coriaceo-crustacea lævi; embryo annularis, albumen copiosum carnosum cingens, cotyledonibus oblongis subfoliaceis concavis radicula gracili infera multo latioribus.—Frutex erectus, robustus, odore nauseo, glaberrimus, ramis virgatis. Folia alterna, petiolata, ovato-lanceolata, persistentia, exsiccatione nigrescentia. Flores racemosi, parvi, virides; racemis axillaribus et terminalibus; pedicellis basi bracteatis apice infra florem 2-bracteolatis. Fructus pisiformis.

Species 1, Canariensis, in regionibus Mediterraneis allata. *Moq. in DC. Prod.* xiii. ii. 87 (excl. sp. n. 2). *Lam. Illustr. t.* 182. *Gærtn. Fruct.* i. *t.* 77. *Jacq. fil. Eclog. t.* 25. Genus certe *Rodetiæ* proximum.

8. **Achatocarpus,** *Triana in Ann. Sc. Nat. ser.* 4, ix. 45.—Flores dioici. Perianthium herbaceum, 5-partitum; segmenta ovato- v. oblongo-rotundata, obtusa, nervosa, fructifera erecta. Fl. ♂: Stamina 10–20, basi perianthii inserta, filamentis filiformibus ima basi connatis; antheræ exsertæ, oblongæ, basi longe 2-fidæ, 2-loculares, primum extrorsum dehiscentes. Ovarii rudimentum 0. Fl. ♀: Staminodia 0. Ovarium oblongo-orbiculare, compressum; stigmata 2, subulato-filiformia, recurva, basi introrsum papillosa v. fimbriata; ovulum 1, funiculo brevi erectum. Bacca globosa, leviter compressa, stigmatum basibus discretis apiculata. Semen erectum, lenticulare, testa crustacea aspera nigra nitida, arillo 0; embryo annularis, albumen farinaceum cingens, cotyledonibus linearibus, radicula elongata infera.—Arbores parvæ v. frutices glaberrimi v. pubescentes, ramis sparsis teretibus interdum spinescentibus. Folia alterna, petiolata, lanceolata v. elliptico-lanceolata, acuta. Flores parvi, in racemos simplices v. compositos graciles axillares dispositi, pedicellis v. pluri-bracteatis v. apice juxta florem minute 2-bracteolatis. Bacca parva, alba.

Species certæ 3, una Mexici, Novæ Granadæ et Venezuelæ incola, duæ Americæ australis extratropicæ *Griseb. Symb. Fl. Argent.* 31; et in herbario Hookeriano exemplar masculum plantæ quartæ verisimiliter hujus generis exstat, foliis subtus pubescentibus, a Jamesonio prope Guayaquil lectæ.

9. **Charpentiera,** *Gaud. in Freyc. Voy. Bot.* 444, *t.* 47, 48.—Flores hermaphroditi, bracteati et 2-bracteolati. Perianthium 5-partitum, basi non induratum, coriaceum; segmenta 5, subæqualia, ovato-rotundata, obtusa, fructifera erecta, enervia. Stamina 5, filamentis basi breviter connatis, laciniis minutis obtusis interjectis; antheræ oblongæ, inclusæ, basi longe 2-fidæ, 2-loculares. Ovarium anguste ovoideum, compressum, in stylum crassum attenuatum, stigmatibus 2 crassiusculis recurvis; ovulum 1, erectum, funiculo brevi. Utriculus perianthio inclusus, late ovoideus, compressus, coriaceus, inde-

hiscens. Semen lenticulare v. subreniforme, erectum, testa tenuiter crustacea nitida atra, arillo 0 ; embryo annularis, albumen farinaceum cingens, cotyledonibus linearibus, radicula infera.—Arbuscula glabra v. partibus novellis tomentosis, ramosa, ramis teretibus. Folia alterna, longe petiolata, ovata oblonga v. obovata, obtusa, integerrima. Flores minuti, secus ramos capillares paniculæ axillaris effusæ sparsi, sessiles, bracteis bracteolisque persistentibus.

Species 1, montium insularum Sandvicensium incola. *Moq. in DC. Prod.* xiii. ii. 322.
Genus multis notis *Rodetiæ* affine.

10. **Banalia,** *Moq. in DC. Prod.* xiii. ii. 278, *excl. sect.* 2 *et* 3.—Flores hermaphroditi, bracteati et 2-bracteolati. Perianthii segmenta 5, subæqualia, membranacea, oblonga, subacuta, tenuiter 3-nervia, fructifera erecta. Stamina 5, filamentis subulatis inæquilongis basi in cyathum membranaceum connatis, laciniis interjectis 0 ; antheræ oblongæ, 2-loculares. Ovarium late ovoideum, compressum; stylus erectus, stigmatibus 2 linearibus revolutis undique papillosis ; ovulum 1, funiculo brevi erectum. Utriculus subglobosus, leviter compressus, perianthio inclusus, membranaceus, indehiscens. Semen erectum, orbiculare v. sublenticulare, testa crustacea punctulata nigra nitida, arillo 0 ; embryo annularis, albumen farinaceum cingens, cotyledonibus linearibus, radicula infera.—Herba erecta, ramosa, glabra, caulibus elongatis. Folia alterna, petiolata, ovato-lanceolata, caudato-acuminata, integerrima, membranacea, basi angustata. Flores spicati, solitarii v. glomerati ; spicæ in paniculas axillares et terminales dispositæ ; bracteæ bracteolæque hyalinæ.

Species 1, montium Peninsulæ Indiæ orientalis incola. *Wight Ic. t.* 1774. *Banalia brasiliana*, Moq., a nobis non visa, ex descr. et ic. Seub. in Mart. Fl. Bras. v. i. 252, t. 71, a genere Asiatico habitu longe recedit et est forte *Chamissoæ* species utriculo tardius v. vix dehiscente ; sect. iii. *Idiopsis*, Moq., est *Chenopodiacea* (*Nitrophila*, S. Wats.).

11. **Chamissoa,** *H. B. et K. Nov. Gen. et Sp.* ii. 158, *t.* 125.—Flores hermaphroditi, bracteati et 2-bracteolati. Perianthii scariosi segmenta 5, æqualia, oblongo-lanceolata, acuminata, striata, fructifera erecta. Stamina 5, filamentis basi in cupulam membranaceam dilatatis, laciniis interjectis 0; antheræ parvæ, lineari-oblongæ, 2-loculares. Ovarium ovoideum ; stylus brevis v. subelongatus, stigmatibus 2 recurvis ; ovulum 1, erectum, subsessile. Utriculus oblongo-ovoideus, compressus, apice umbilicatus v. nudus v. cono terminatus, circumscissus, perianthium sæpius excedens, 1-spermus. Semen erectum, globoso- v. reniformi-lenticulare, testa atra crustacea lævi, arillo minuto v. amplo semen undique involvente ; embryo annularis, albumen copiosum v. parcum cingens, cotyledonibus linearibus planis, radicula infera.—Herbæ elatæ, ramosæ, volubiles scandentes v. sarmentosæ, caule sæpius robusto. Folia alterna, petiolata, ovata v. ovato-lanceolata, integerrima. Flores in spicas elongatas v. in ramos panicularum terminalium et axillarium dense v. laxe congesti, sessiles, albi v. virescentes.

Species 6–8, Americæ tropicæ et australis subtropicæ incolæ. *Moq. in DC. Prod.* xiii. ii. 248 (excl. sect. 1, quæ *Allmania*, Br.). *Seub. in Mart. Fl. Bras.* v. i. *t.* 74. *Griseb. Pl. Lorentz.* 31.
Genus in sectiones 2 dividitur—
1. *Euchamissoa*, Moq. l. c. Utriculus apice disco crassiusculo umbonatus. Arillus semen involvens.
2. *Achlamys*, Moq. l. c. Utriculus apice simplex v. cono terminatus. Arillus minutus.

12. **Allmania,** *R. Br. in Wall. Cat. Herb. Ind. n.* 6890.—Flores hermaphroditi, bracteati et 2-bracteolati. Perianthii scariosi segmenta 5, æqualia, oblongo-lanceolata, acuminata, striata, fructifera erecta. Stamina 5, filamentis basi in cupulam membranaceam dilatatis, laciniis interjectis 0 ; antheræ parvæ, lineari-oblongæ, 2-loculares. Ovarium ovoideum, in stylum elongatum strictum angustatum, stigmate capitellato 2-lobo ; ovulum 1, subsessile, erectum. Utriculus perianthio inclusus, subglobosus v. ovoideus, compressus, circumscissus. Semen erectum, subgloboso-lenticulare, testa atra crustacea lævi v. punctulata, arillo carnoso cupulari brevi ; embryo annularis, albumen copiosum farinaceum cingens, cotyledonibus linearibus planis apicibus interdum abrupte

incurvis, radicula infera.—Herbæ erectæ v. diffusæ, glabræ v. pubescenti-scaberulæ. Folia alterna, linearia obovata v. spathulata, integerrima. Flores in capitula terminalia et axillaria sessilia v. pedunculata dispositi, albi v. virescentes.

Species 3 v. 4, Asiæ tropicæ incolæ. *Moq. in DC. Prod.* xiii. ii. 248 (*Chamissoæ sect.* 1). *Wight in Hook. Journ. Bot.* i. 226 *t.* 128; *Ic. t.* 1769 *ad* 1772 (*Chamissoa*). *Burm .Fl. Ind. t.* 25, *f.* 1 (*Celosia*).

13. **Digera,** *Forsk. Fl. Æg. Arab.* 65.—Flores 3-ni, bracteati et 2-bracteolati, lateralibus rudimentariis ad squamam cristatam reductis, intermedio perfecto. Perianthium submembranaceum, 4-5-partitum, basi non induratum; segmenta oblonga, fructifera erecta, 2 exteriora majora 5-9-nervia, interiora angustiora 2-3-nervia. Stamina 5, filamentis liberis filiformibus, laciniis interjectis 0; antheræ didymæ, 2-loculares. Ovarium breviter oblongum, compressum, truncatum; stylus filiformis, stigmatibus 2 brevibus recurvis; ovulum 1, erectum, funiculo brevi. Nux subglobosa, perianthio inclusa, leviter compressa, crustacea, rugulosa, lateribus subcarinatis. Semen erectum, subglobosum, testa tenui brunnea albumini farinaceo adhærente, arillo 0; embryo annularis, cotyledonibus linearibus incurvis, radicula descendente.—Herba annua e basi ramosa, fere glaberrima, ramis angulatis. Folia alterna, gracile petiolata, ovata oblonga v. lanceolata, acuta, integerrima. Flores sordide albi v. rosei, in spicas axillares elongatas longe pedunculatas dispositi.

Species 1 v. 2, Asiæ et Africæ tropicæ incolæ. *Moq. in DC. Prod.* xiii. ii. 323. *Wight, Ic. t.* 732 (*Desmochæta*). Genus forsan melius prope *Pupaliam* locatum, sed ovulum fere sessile erectum, et radicula infera.

14. **Amarantus,** *Linn. Gen. n.* 1060 (Amaranthus).—Flores monoici v. polygami, bracteati et 2-bracteolati. Perianthii segmenta 5, rarius 1-3, membranacea, æqualia v. subæqualia, in fl. ♂ ovato-lanceolata, in fl. ♀ sæpius oblonga v. spathulato-oblonga, interdum post anthesin indurata v. basi incrassata, fructifera erecta. Stamina 5, rarius 1-3, filamentis subulatis v. filiformibus basi liberis, laciniis interjectis 0; antheræ oblongæ v. lineari-oblongæ, 2-loculares. Ovarium ovoideum, compressum; stylus brevis v. 0, stigmatibus 2-3 subulatis v. filiformibus undique papillosis v. hirtis; ovulum 1, subsessile, erectum. Utriculus perianthio sæpius inclusus, orbicularis v. ovoideus, compressus, indehiscens v. circumscissus, membranaceus v. coriaceus, apice simplici v. 2-3-dentato. Semen erectum, rotundatum, compressum, testa crustacea lævi nitida, margine acuto v. obtuso, arillo 0; embryo annularis, albumen farinaceum cingens, cotyledonibus linearibus, radicula infera. —Herbæ annuæ, erectæ v. decumbentes, glabræ v. pubescentes, rarius pilosæ. Folia alterna, basi in petiolum angustata, ovata lanceolata v. linearia, integerrima v. rarius sinuato-dentata, apice sæpe mucronulato. Flores parvi v. minuti, in glomerulos axillares v. paniculas densifloras terminales dispositi, albi virides rosei v. purpurascentes; bracteæ et sæpius perianthia persistentia.

Species enumeratæ ad 45, sed aliæ non nisi hortis notæ, aliæ characteribus minimi valoris distinctæ. *Moq. in DC. Prod.* xiii. ii. 255. *Benth. Fl. Austral.* v. 212. *A. Braun et Bouché in App. Ind. Sem. Hort. Berol.* 1872. *S. Wats. Bot. Calif.* ii. 40 *ined.* *Gærtn. Fruct.* ii. *t.* 128. *Nees Gen. Fl. Germ.* *Willd. Hist. Amarant. Turici*, 1790, *cum tabb.* 12. *Reichb. Iconogr. Bot. t.* 471 *ad* 475. *Lam. Illustr. t.* 767. *Benth. Bot. Sulph. t.* 51. *Anderss. Eugenies Resa Bot. t.* 2. *Fl. Dan. t.* 2246 *Wight Ic. t.* 512 *ad* 514, 713 *ad* 720. *Torr. Fl. N. York, t.* 93. *Seub. in Mart. Fl. Bras.* v. i. *t.* 73. *Bot. Mag. t.* 2227.

Glomeraria, *Cav. Descr. Pl. Leccion.* 319 (Pyxidium, *Mœnch. Meth.* 358) genus propositum fuit pro *A. viridi* Lam. et *A. deflexo* Linn. floribus 3-meris nec 5-meris.

Euxolus, *Raf. Fl. Tellur.* 42, *ex Moq. in DC. Prod.* xiii. ii. 272 (Albersia, *Kunth Fl. Berol. ed.* 2, 144 *ex Endl. Gen.* 1377; Pentrias, *Raf. ex Moq.*) constat e speciebus *Amaranti* floribus ♂ et ♀ consimilibus v. subsimilibus et utriculo indehiscente v. irregulariter rupto. Species includit ad 12, tropicas et subtropicas. *Wight Ic. t.* 1773. *Jacq. Ic. Rar. t.* 344 (*Chenopodium*). *Seub. in Mart. Fl. Bras.* v. i. *t.* 72. *Amarantus Blitum, L.*, ab *Euxolo oleraceo, Moq.*, difficillime distinguendus est.

Mengea, *Schauer in Pl. Meyen.* 405, *Moq. l. c.* 270, ab *Euxolo* non differt nisi perianthii ebracteolati segmentis staminibusque 1-2.

Sclεropus, *Schrad. Ind. Sem. Hort. Gœtt.* 1835; *Moq. l. c.* 271, est, monente A. Grayo in Proc. Amer. Journ. Sc. v. 169, *Euxoli* species, pedunculis abnormaliter incrassatis.

Ambloctyne, *Raf. Fl. Tellur.* 42 *ex Moq. l. c.* 269. *A. Gray in Proc. Amer. Acad.* v. 168. *Anderss. Eugenies Resa, Bot. t.* 2. (Rœmeria, *Mœnch. Meth.* 341. Sarratia, *Moq. l. c.*) ab *Amarantis* typicis differt perianthio ♀ magis campanulato, segmentis spathulato-oblongis demum induratis v. incrassatis, sæpius basi cum rachi articulato et demum deciduo. Species pleræque Americanæ et Australasicæ. *A. Palmeri*, Wats. Bot. Calif. ii. 42 ined., species est floribus dioicis.

15. **Acnida,** *Linn. Gen. n.* 1114.—Flores dioici, bracteati et 2-bracteolati, ♂ et ♀ dissimiles. Fl. ♂: Perianthii segmenta 5, subæqualia, membranacea v. subscariosa, erecta, aristato-apiculata, 1-nervia, fructifera erecta. Stamina 5, filamentis subulatis basi liberis, laciniis interjectis 0; antheræ lineari-oblongæ, 2-loculares. Ovarii rudimentum 0. Fl. ♀: Perianthium 0. Staminodia 0. Ovarium ovoideum v. subrotundatum, compressum v. obtuse 3-gonum; stylus vix ullus, stigmatibus 2–5 brevibus v. elongatis undique papillosis v. subplumosis; ovulum 1, subsessile, erectum. Utriculus membranaceus v. carnosulus, perianthio inclusus v. exsertus, lævis v. rugulosus, indehiscens v. rarius irregulariter ruptus. Semen erectum, obovoideum v. rotundatum, compressum, testa crustacea lævi nitida, arillo 0; embryo annularis, albumen farinaceum cingens, cotyledonibus linearibus, radicula infera.—Herbæ glabræ, erectæ v. suberectæ, ramosæ. Folia alterna, petiolata, integerrima, penninervia. Flores in spicas glomerulosve paniculatos terminales et axillares dense v. laxe fasciculati; ♂ majusculi, pallidi; ♀ minores v. minuti, virescentes, sæpe densissime conferti.

Species 4 v. 5, Americæ boreali-orientalis et ins. Trinidad incolæ, ab auctoribus valde confusæ, in sectiones sequentes (ex schedis A. Grayi benevole communicatis) distribuendæ:—

1. *Euacnida*, A. Gray. Utriculus 3–5-gonus, sæpius carnosulus, stigmatibus subulatis v. basin versus crassioribus papilloso-pilosis. Semen obovoideum.—Includit *A. rusocarpam* (melius *rhyssocarpam*) Michx. (non Moq.); *A. cannabinam* Linn.; Gærtn. Fruct. ii. t. 126; et *A. australem* A. Gr. (*A. cannabina*, Chapm. Fl. S. U. States 381, non Linn.).

2. *Montelia*, Moq. partim (Montelia, *A. Gray Man. Bot. N. U. States*, ed. 2, 369, *utriculo excepto*). Utriculus submembranaceus, vix angulatus, rugosulus, demum irregulariter ruptus v. indehiscens, stigmatibus prælongis filiformibus divergentibus fere plumosis. Semen reniformi-orbiculatum.—Species unica, *A. tuberculata*, Moq. in DC. Prod. xiii. ii. 277. (*A. rusocarpa*, Moq. l. c. non Mich. *A. cannabina* var. *concatenata*, Moq. l. c. 278. *Montelia tamariscina*, A. Gr. l. c. partim).

16. **Acanthochiton,** *Torr. in Sitgr. Rep.* 170, *t.* 13.—Flores dioici, axillares, glomerati, dissimiles, ♂ ebracteati, bracteolæ minutæ v. 0; ♀ bracteis magnis late cordatis rigidis apice spinulosis complicatis recurvis reconditi; bracteolæ v. minutæ, v. elongatæ rigidæ setaceæ v. lanceolatæ. Fl. ♂: Perianthii segmenta 5, subæqualia, lanceolata, acuminata, 1-nervia, fructifera erecta. Stamina 5, filamentis filiformibus liberis; antheræ oblongæ, 2-loculares. Ovarii rudimentum 0. Fl. ♀: Perianthium 0. Staminodia 0. Ovarium ovoideum, compressiusculum; styli 2–4, capillares, intus pilosuli; ovulum 1, erectum, funiculo brevi. Utriculus late ellipsoideus, compressus, membranaceus, circumscissus. Semen erectum, obovoideum, compressum, testa tenuiter coriacea lævissima nitida, arillo 0; embryo annularis, albumen farinaceum cingens, cotyledonibus angustis, radicula infera.—Herba annua, gracilis, glabra, erecta, parce ramosa, caule costato, costis pallidis. Folia alterna, elongato-lineari-lanceolata, aristato-acuminata, in petiolum gracilem angustata, integerrima, costa valida, nervis obscuris. Florum glomeruli subspicati; fœmineorum bracteæ apices versus ramulorum imbricatæ, complicatæ, nitidæ, reticulatim nervosæ, marginibus membranaceis crenulatis.

Species 1, Americæ borealis calidæ, Texas occidentalis et Arizonæ incola.

17. **Saltia,** *R. Br. in Wall. Pl. As. Rar.* i. 17, *nomen tantum* (*non ejusd. in Append. Salt, Abyss.*).—Flores dioici, spicati, bracteati; ♂ singulatim 2-bracteolati, floribus sterilibus non stipati; ♀ basi bracteolis 3–4 irregulariter insertis et utrinque flore imperfecto demum in appendicem ramosam longissime sericeo-barbatam mutato stipati. Peri-

anthium breviter et crasse stipitatum, chartaceum, 5-partitum; segmenta subæqualia, ovato-oblonga, subacuta, obscure 3–5-nervia, dorso sericea, fructifera immutata. Stamina 5, in fl. ♀ minuta, antheris cassis, in fl. ♂ disco cupulari carnosulo inserta, filamentis subulatis, laciniis interpositis 0; antheræ lineari-oblongæ, 2-loculares. Ovarium obovoideum, vertice dilatato convexo, stylus filiformis, stigmate capitellato; ovulum 1, ab apice funiculi elongati suspensum. Utriculus perianthio fere æquilongus, oblongus, membranaceus, vertice parvo coriaceo, indehiscens. Semen inversum, oblongum, turgidum, testa membranacea brunnea albumini farinaceo adhærente, arillo 0; embryo periphericus, cotyledonibus lineari-lanceolatis concavis apicibus incurvis exteriore latiore, radicula gracili erecta æquilonga.—Fruticulus glaber, rigidus, ramulis cylindraceis lignosis. Folia sparsa, sessilia, anguste obovata, integerrima, carnosula, glauca. Flores in spicas laxas puberulas simplices v. paniculatim ramosas dispositi.

Species 1, Arabica. *Moq. in DC. Prod.* xiii. ii. 325 (*excl. syn. Sedderæ et hab. Sinai*). *T. Anders. in Journ. Linn. Soc. Bot.* v. *Suppl.* 32, *t.* 3.

18. **Sericocoma,** *Fenzl in Endl. Gen. Pl. Suppl.* iii. 33, *et in Linnæa* xvii. 323.—Flores spicati v. capitellati, 1–2 hermaphroditi cum sterilibus 1–∞ in fasciculum lanatum v. sericeum bracteatum et bracteolatum aggregati; bracteolæ interiores (v. segmenta perianthii florum sterilium) in spinas v. appendices ramosas cum basibus induratis florum perfectorum concretas desinentes. Perianthii crasse coriacei v. chartacei segmenta 5, basi connata, ovato-lanceolata, acuminata v. pungentia, interiora angustiora. Stamina 5, filamentis filiformibus basi membrana connexis, laciniis interpositis brevibus rotundatis v. 0; antheræ oblongæ, 2-loculares. Ovarium ovoideum v. oblongum, æquale v. uno latere gibbum v. in cornu erectum productum, tomentosum v. lanatum; stylus brevis v. elongatus v. 0, stigmate capitellato v. plumoso; ovulum 1, ab apice funiculi elongati suspensum. Utriculus perianthio inclusus, membranaceus, indehiscens, vertice non indurato. Semen inversum, oblongum v. obovoideum, leviter compressum, testa membranacea v. tenuiter coriacea, arillo 0; embryo periphericus, albumen farinaceum includens, cotyledonibus lanceolatis apicibus incurvis, radicula erecta æquilonga.—Herbæ v. fruticuli habitu varii, 2–3-chotome ramosi v. ramis alternis. Folia linearia v. oblonga, rarius obovata, sessilia, integerrima, sæpissime sericeo-lanata.

Species ad 11, Africæ tropicæ et subtropicæ australis incolæ. *Moq. in DC. Prod.* xiii. ii. 306.

Genus quoad flores polymorphum, in sectiones sequentes divisum:—

1. *Kyphocarpa*, Fenzl in Linnæa l. c. (sphalmate *Hypocarpha* in Endl. l. c.). Folia opposita. Flores spicati; ☿ 2–3 steriles in spinas mutati. Laciniæ inter filamenta breves obtusæ. Utriculus gibbus v. uno latere sursum in cornu productus. Includit *S. trichinoideam*, Fenzl, species nobis incognita; *S. Chrysurum*, Meissn. et *S. angustifoliam*, Hook. f. (*S. Chrysurus* var. *angustifolia*, Moq. in Herb. Hook. *Cyathula angustifolia*, Moq. in DC. l. c. Welw. It. Angol. No. 6489).

2. *Euchroa*, Fenzl in Linnæa l. c. (sphalmate *Euchlora* in Endl. l. c.). Folia opposita et alterna. Flores spicati v. capitati, ☿ solitarii v. 2-ni, steriles immutati v. in spinas mutati. Laciniæ inter filamenta 0 v. brevia obtusa. Utriculus rectus, stylo elongato centrali.—Includit species 2 valde dissimiles. 1. *S. pungens*, Fenzl (*Eurotia glabra*, E. Mey.) foliis alternis, floribus capitatis ☿ binis et laciniis inter filamenta brevibus. 2. *S. avolans*, Fenzl (*inclusa S. capensi*, Moq.) foliis oppositis, floribus fasciculatis, ☿ solitario, et laciniis inter filamenta (non obstante descriptione Fenzlii) plane 0.

3. *Sericorema*. Folia sparsa, opposita et fasciculata. Flores longe et laxe spicati, ☿ 1–3 steriles, 2 laterales e setis plumosis demum excrescentibus et in spinas furcatas ascendentes incurvas longissime sericeas desinentibus. Laciniæ inter filamenta 0. Utriculus rectus. Includit:—1. *S. remotifloram* (*Trichinium*, Hook. Ic. Pl. t. 596; *Pupalia*, Moq.) foliis fasciculatis, flore ☿ solitario, ovario elongato, stigmate sessili plumoso. 2. *S. denudatam*, Hook. f. (Welw. It. Angol. n. 6503) ramulis oppositis, floribus ☿ 2-nis, et stylo elongato. 3. *S. Welwitschii*, Hook. f. (Welw. It. Angol. n. 6508) bracteolis amplis hyalinis flores velantibus, floribus ☿ 2-nis inter se connatis et florem 10-merum 2-gynum mentientibus, stylo elongato et floribus sterilibus demum in cornua furcata ossea inflexa torta desinentibus; embryo annularis. An genus novum?

S. capitata Moq. est *Calicorema capitata* nob; *S. pallida*, Sp. Moore in Trim. Journ. Bot. 1877, 70, fructu ignoto omnino dubia est. *S. somalensis*, Sp. Moore, l. c., est *Chionothrix somalensis* nob. Planta valde anomala est *S. Bainesii*, Hook. f.: fruticosa, sericeo-tomentosa, foliis oppositis obovatis, floribus capitatis, capitulis foliaceo-bracteatis, perianthii segmentis albidis, laciniis inter filamenta 0, ovario recto villosissimo, stylo rigido, fructu ignoto.

19. **Centema,** *Hook. f. gen. nov.*—Flores spicati, 1–2 hermaphroditi cum sterilibus 1–∞ in fasciculum bracteatum et bracteolatum aggregati, bracteolæ interiores (v. segmenta perianthii florum sterilium) in spinas validas simplices basi incrassatas cum basibus florum hermaphroditorum induratorum connatas desinentes. Perianthii crasse coriacei v. chartacei segmenta 5, basi connata, ovato-lanceolata, acuminata, 3–5-nervia, interiora angustiora. Stamina 5, filamentis filiformibus basi membrana connexis basibus contiguis v. discretis, laciniis interpositis quadratis crenatis; antheræ 2-loculares, lineari-oblongæ. Ovarium ovoideum, in stylum gracilem attenuatum, glabrum v. puberulum, stigmate capitellato oblique truncato v. breviter 2-cruri; ovulum 1, ab apice funiculi elongati suspensum. Utriculus perianthio inclusus, membranaceus, indehiscens, vertice non indurato. Semen inversum, obovoideo-globosum, leviter compressum, testa tenuiter coriacea, arillo 0; embryo periphericus, albumen farinaceum cingens, cotyledonibus lineari-lanceolatis concavis, apicibus incurvis, exteriore latiore, radicula gracili erecta æquilonga.—Herbæ annuæ?, erectæ, glabræ v. puberulæ, caule tereti v. sulcato superne 3-chotome ramoso. Folia opposita, sessilia, linearia v. lineari-oblonga, 1-nervia, integerrima. Flores in spicas erectas terminales congesti; bracteæ persistentes, bracteolæ 2 interiores floribus imperfectis immixtæ.

Species 2 v. 3, Africæ tropicæ incolæ. 1. *C. Kirkii*, Hook. f., caule sulcato, foliis anguste linearibus, laciniis inter filamenta quadratis, ovario puberulo, ad oras lacuum Nyassæ et Tanganykæ incola. 2. *C. angolensis*, Hook. f. (Welw. It. Angol. No. 6538) caule tereti, foliis oblongo-linearibus, laciniis inter filamenta 0, ovario glaberrimo et stigmate 2-cruri. His verisimiliter addenda est *Pupalia subfusca*, Moq. in DC. Prod. xiii. ii. 332, flore perfecto solitario, imperfecto nondum evoluto, laciniis inter filamenta 0, ovario glaberrimo, stigmate nunc oblique truncato nunc breviter 2-fido.

20. **Cyathula,** *Lour. Fl. Coch.* i. 101 (Polyscalis, *Wall. Cat. Herb. Ind. n.* 6939).—Flores 1–2 perfecti cum aliis imperfectis in fasciculos bracteatos et bracteolatos spicatos v. capitatos dispositi; imperfectorum segmenta demum in aristas elongatas apice uncinatas producta. Fl. perfecti: Perianthium scariosum, 5-partitum, basi non induratum; segmenta subæqualia v. interiora angustiora, ovata v. ovato-lanceolata, acuminata v. aristata, 1-nervia. Stamina 5, filamentis basi membrana connexis, laciniis interpositis linearibus v. quadratis fimbriato-laceris; antheræ oblongæ, 2-loculares. Ovarium obovoideum; stylus filiformis, stigmate capitellato; ovulum 1, ab apice funiculi elongati suspensum. Utriculus ovoideus, perianthio arcte inclusus, apice areolatus, membranaceus, indehiscens. Semen inversum, oblongum, testa brunnea tenuiter coriacea, arillo 0; embryo periphericus, albumen farinaceum cingens, cotyledonibus planis linearibus apice incurvis radicula erecta latioribus.—Herbæ, interdum basi frutescentes, glabriusculæ v. tomentosæ, ramulis teretibus. Folia opposita, petiolata, ovata, acuminata, integerrima. Florum fasciculi parvi v. majusculi, virides v. albi, post anthesin reflexi; bracteæ ovatæ, concavæ, scariosæ, sæpius aristatæ.

Species ad 10, regionum calidiorum Asiæ, Africæ et Americæ meridionalis incolæ. *Moq. in DC. Prod.* xiii. ii. 325 (*excl. C. angustifolia* quæ *Sericocoma Chrysurus*). *Walp. Ann.* iii. 300. *Wight Ic. t.* 733 (*Desmochæta*) 1781, 1782. *Mart. Nov. Gen. et Sp. t.* 156, 158, *f.* 1 (*Pupalia*).

21. **Pupalia,** *Juss. in Ann. Mus. Par.* ii. 132. (Syama, *Jones in Asiat. Res.* iv. 261.)—Flores perfecti solitarii cum aliis imperfectis in fasciculos bracteatos et bracteolatos interrupte spicatos dispositi; imperfectorum segmenta in aristas stipitatas apice uncinatas stellatim patentes desinentes. Fl. perfecti: Perianthium herbaceum, 5-partitum, basi non induratum; segmenta subæqualia, lanceolata, acuminata, 3–5-nervia. Stamina 5, filamentis subulatis basi brevissime connatis, laciniis interpositis 0; antheræ didymæ, 2-loculares. Ovarium ovoideum, in stylum gracilem attenuatum, stigmate capitellato;

ovulum 1, ab apice funiculi elongati suspensum. Utriculus perianthio arcte inclusus, ovoideus, compressus, membranaceus, apice areolatus, indehiscens. Semen inversum, lenticulare, rostellatum, testa tenuiter crustacea castanea nitida, arillo 0; embryo periphericus, albumen farinaceum cingens, cotyledonibus linearibus planis tenuibus apicibus incurvis radicula ascendente paulo latioribus.—Herbæ v. suffrutices, glabriusculæ v. tomentosæ, 3-chotome ramosæ, ramis teretibus. Folia opposita, petiolata, ovata v. orbicularia, obtusa v. acuminata, integerrima. Spicæ simplices v. paniculatæ. Flores virides; bracteæ scariosæ.

Species 3, Asiæ et Africæ tropicæ incolæ. *Moq. in DC. Prod.* xiii. ii. 331, *excl. sect.* ii. *Walp. Ann.* iii. 301. *Gærtn. Fruct.* ii. *t.* 128 (*Achyranthes lappacea.*) *Wight Ic. t.* 731 (*Desmochæta*) *pessime depicta,* 1783.

Desmochæta, *DC. Cat. Hort. Monsp.* 101, includit *Pupaliam* et *Cyathulam.*

22. **Psilotrichum,** *Blume Bijd.* 544. (Leiospermum, *Wall. Cat. Herb. Ind. n.* 6923.)—Flores hermaphroditi, bracteati et 2-bracteolati. Perianthium chartaceum, 5-partitum, post anthesin immutatum v. induratum; segmenta linearia v. ovato-oblonga, exteriora majora rigida cymbiformia v. basi gibba, costata, sæpe villosa, intus glabra. Stamina 5, filamentis inæquilongis linearibus v. subulatis, basi in annulum cupulam v. tubum connatis, laciniis interpositis 0; antheræ breves v. elongatæ, 2-loculares. Ovarium subglobosum v. oblongum; stylus gracilis, stigmate capitellato v. 2-fido; ovulum 1, ab apice funiculi elongati suspensum. Utriculus perianthii basi sæpe indurato arcte inclusus, globosus v. compressus, membranaceus, indehiscens. Semen inversum, lenticulare, testa coriacea v. crustacea nitida, arillo 0; embryo periphericus, albumen farinaceum cingens, cotyledonibus linearibus planiusculis, radicula supera. —Herbæ v. frutices trichotome ramosæ, glabræ pubescentes v. lanuginosæ, ramis teretibus. Folia opposita, ovata v. elliptico-lanceolata, integerrima. Flores in spicas v. capitula axillaria solitaria v. paniculata dispositi, albi v. virescentes; bracteæ et bracteolæ parvæ, hyalinæ.

Species 10, Asiæ et Africæ tropicæ incolæ et 2 Sandvicenses. *Moq. in DC. Prod.* xiii. ii. 279, *excl. sp. n.* 4. *Thwaites Enum. Pl. Zeyl.* 248. *Wight Ic. t.* 721 (*Leiospermum*) et 1775. *Ptilotus* (*sect. Nototrichium,* A. Gray) *sandvicensis,* Mann Enum. Hawaii Pl. 200, est *Psilotrichi* species.

23. **Psilostachys,** *Hochst. in Flora* 1844, *Beil.* 6 *t.* 4. (Poeckia, *Endl. Gen. Pl. Suppl.* iv. 43.)—Flores hermaphroditi, bracteati et 2-bracteolati. Perianthum ovoideum, 5-partitum, coriaceum; segmenta mutica, 2–3 exteriora ovato-lanceolata v. cymbiformia, ventricosa, nervis 3 valde prominentibus, interiora angustiora, tenuiora, fructifera immutata. Stamina 5, disco parvo v. conspicuo inserta, filamentis basi non aut vix connexis late subulatis, laciniis interpositis 0; antheræ breves, 2-loculares. Ovarium rotundatum v. ovoideum, compressum, glabrum, in stylum rectum attenuatum, stigmate capitellato; ovulum 1, ab apice funiculi elongati suspensum. Utriculus perianthio arcte inclusus, membranaceus, orbicularis v. fere rotundatus, indehiscens. Semen inversum, orbiculare v. subglobosum, testa coriacea brunnea punctulata, arillo 0; embryo uncinatus, cotyledonibus linearibus tenuibus obtusis radicula gracili ascendente latioribus.—Herbæ erectæ, graciles, dichotome ramosæ, glabræ v. patentim sericeo-pilosæ, superne paniculatim ramosæ. Folia opposita, petiolata, ovato-cordata, integerrima, glabra v. sericea. Flores parvuli, spicati, spicis remotifloris laxe paniculatis, rhachi capillari sæpe flexuosa, paniculis axillaribus et terminalibus elongatis filiformibus divaricatis; bracteæ et bracteolæ perianthio multo breviores.

Species 3: 1. *P. gnaphalobrya,* Hochst. l. c., Arabica et Nubica. 2. *P. sericea,* Hook. f. (*Achyranthes,* Wight Ic. t. 726), provinciæ Goozerat, Indiæ orientalis, incola. Et 3. Species nondescripta prope Melindi Africæ orientalis a Kirkio detecta.

24. **Ptilotus,** *R. Br. Prod.* 415.—Flores hermaphroditi, bracteati et 2-bracteolati. Perianthium scariosum membranaceum v. hyalinum, 5-partitum, basi non induratum; segmenta lineari-oblonga, extus glabra v. basi pilis onusta, intus glabra v. interiora basin versus lanata. Stamina 5, omnia fertilia v. nonnulla ananthera, filamentis inæquilongis

linearibus v. superne dilatatis, basi in cupulam connatis, laciniis interpositis 0; antheræ 2-loculares. Ovarium subglobosum, glabrum; stylus gracilis, stigmate capitellato; ovulum 1, ab apice funiculi elongati suspensum. Utriculus perianthio inclusus, membranaceus, indehiscens. Semen inversum, globosum v. lenticulare, testa crustacea atra nitida, arillo 0; embryo annularis, albumen farinaceum cingens, cotyledonibus linearibus planiusculis, radicula supera.—Herbæ annuæ, ramosæ, glabræ pubescentes v. lanuginosæ. Folia alterna, sæpius angusta, integerrima. Flores in spicas terminales oblongas ovoideas v. conicas solitarias v. paniculatas dispositi, albi, rhachi lanuginosa; bracteæ et bracteolæ scariosæ.

Species 11, Australiæ tropicæ et subtropicæ incolæ, quarum una (fide Blumei) moluccana. *Benth. Fl. Austral.* v. 241.—Species perianthio extus lanato non nisi habitu et defectu laciniarum inter filamenta ab *Ærua* distinguendæ. *Psiloti sect. Phænostachys*, Moq. in DC. Prod. xiii. ii. 281, est *Psilotrichi* species.

25. **Trichinium**, *R. Br. Prod.* 414.—Flores hermaphroditi, bracteati et 2-bracteolati. Perianthium angustum v. elongatum, 5-partitum, basi induratum; segmenta æqualia v. 3 interiora minora, elongato-linearia, rigida, basin versus 3-nervia, apicibus scariosis nudis exceptis pilis articulatis barbata v. plumosa. Stamina 5, filamentis inæqualibus 1–3 sæpius anantheris v. antheris effœtis basi in tubum membranaceum connatis, laciniis interpositis 0 v. rarius parvis hyalinis; antheræ lineares oblongæ v. didymæ, 2-loculares. Ovarium sessile v. stipitatum, glabrum v. lanuginosum; stylus excentricus, rigidus, gracilis, stigmate capitellato; ovulum 1, ab apice funiculi elongati suspensum. Utriculus basi perianthii indurati inclusus, membranaceus, stipitatus v. basi angustatus, obovoideus, obliquus, indehiscens. Semen inversum, oblongum, testa tenuiter coriacea nitida, arillo 0 v. membranaceo; embryo hamatus, albumen farinaceum v. subcarnosum cingens, cotyledonibus linearibus elongatis, radicula brevi supera.—Herbæ suffrutices v. rarius fruticuli, glabri v. pilis articulatis aut stellatis pubescentes. Folia alterna, angusta, rarius obovata v. spathulata, integerrima. Flores in spicas densas v. capitula globosa v. oblonga dispositi, pro ordine majusculi v. magni, albi straminei v. rosei; bracteæ et bracteolæ hyalinæ, nitidæ. Stamina et ovarium lana densa, e basi perianthii v. cupula filamentorum oriunda, induta.

Species ad 50, Australiæ incolæ. *Benth. Fl. Austral.* v. 217. *Gaud. in Freyc. Voy. Bot. t.* 49. *Field et Gard. Sert. t.* 52, 53. *Hook. f. Fl. Tasm. t.* 94 (antheræ sphalmate 1-loculares depictæ). *F. Muell. Lith. Pl. Vict. t.* 78, ined. *Bot. Reg.* 1839, *t.* 28

Arthrotrichium, *F. Muell. in Trans. Bot. Soc. Edinb.* vii. 500 ad *T. calostachyum*, speciem laciniis filamenta interjectis, conditum fuit.

Hemisteirus, *F. Muell. in Linnea*, xxv. 434, est *T. corymbosum*, Gaud., species marginibus segmentorum perianthii nudis, et semine arillato.

Goniotriche, *Turcz. in Bull. Soc. Imp. Nat. Mosc.* 1849, ii. 37 (sphalmate *Gomotriche*, ex eod. l. c. 1852, ii. 181), est *T. obovatum*, Gaud. nullo charactere a *Trichiniis* typicis generice distinguendum.

26. **Chionothrix**, *Hook. f. gen. nov.*—Flores spicati, hermaphroditi, bracteati et 2-bracteolati. Perianthium dure coriaceum, 5-partitum, basi non induratum; segmenta dorso et marginibus pilis sericeis albis suberectis segmenta non excedentibus onusta, exteriora oblongo-lanceolata, mutica, 3-nervia, interiora angustiora. Stamina 5, filamentis late linearibus basi in tubum elongatum membranaceum connatis, sinubus acutis, laciniis interpositis 0; antheræ 2-loculares, apice lato filamenti dorso insertæ, lineari-oblongæ. Ovarium obovoideum, glabrum, in stylum rectum attenuatum, stigmate capitellato; ovulum 1, ab apice funiculi elongati pendulum. Utriculus perianthio inclusus, membranaceus. Semen . . . .—Frutex pubescens, trichotome ramosus, ramulis teretibus lignosis. Folia opposita, petiolata, obovata, obtusa, integerrima, coriacea, utrinque setulis basi tumidis hirtella. Flores in spicas graciles elongatas pendulas paniculatas dispositi, straminei; bracteæ bracteolæque cymbiformes, hyalinæ, perianthio multo breviores; rhachi spicarum tomentosa, perianthio pilis immerso.

Species 1, *S. somalensis*, montium Somali terræ Africæ tropicæ orientalis incola. *Sericocoma somalensis*, Sp. Moore in Trim. Journ. Bot. 1877, 70.

27. **Nothosærua**, *Wight, Ic.* vi. 1. (Pseudanthus, *Wight, Ic.* v. 3, *t.* 1776 *bis*, B.)—Flores minuti, hermaphroditi, bracteati et 2-bracteolati. Perianthium hyalinum, lana involutum, basi haud induratum, 4-partitum; segmenta oblonga, subæqualia, obtusa, concava, 1-nervia. Stamina 1–2, hypogyna, filamentis basi liberis filiformi-subulatis, laciniis interpositis 0; antheræ didymæ. Ovarium oblongum, compressum; stylus brevissimus, stigmate capitellato; ovulum 1, funiculo elongato suspensum. Utriculus perianthio inclusus, oblongus, compressus, tenuiter membranaceus, indehiscens. Semen inversum, lenticulare, marginibus obtusis, testa tenuiter crustacea nitida, arillo 0; embryo hamatus, albumen carnoso-farinosum includens, cotyledonibus linearibus planiusculis, radicula supera.—Herba annua, ramis oppositis brachiatis, inflorescentia excepta glabra. Folia opposita, gracile petiolata, oblonga v. ovata, obtusa, integerrima, membranacea. Flores interdum 3- v. 5-meri, minimi, albi, in spiculas axillares solitarias v. fasciculatas sessiles dispositi. Utriculus perianthio subæquilongus.

Species 1, Asiæ et Africæ tropicæ incola. *Moq. in DC. Prod.* xiii. ii. 304 (*Ærua brachiata*, Mart.). Staminodia a Moquino descripta, a nobis non visa.

28. **Ærua**, *Forsk. Fl. Æg. Arab.* 170 (Ærva).—Flores hermaphroditi polygami v. dioici, bracteati et 2-bracteolati. Perianthium breve, membranaceum v. subchartaceum, 5- rarius 4-partitum, basi non induratum; segmenta subæqualia v. 3 interiora angustiora, oblonga v. lanceolata, obtusa acuta v. acuminata, omnia v. 3 interiora tantum lanata. Stamina 5, rarius 4, filamentis sæpius inæquilongis subulatis, basi in cupulam brevem rarius elongatam connatis, laciniis interpositis brevibus v. elongatis; antheræ didymæ, 2-loculares. Ovarium obovoideum v. subglobosum; stylus brevis v. elongatus, stigmatibus 2 v. stigmate capitellato, ovulum 1 ab apice funiculi elongati suspensum. Utriculus perianthio inclusus, membranaceus, indehiscens v. vertice coriaceo circumscisso. Semen inversum, ovoideum v. reniforme, compressum, testa tenuiter coriacea, arillo 0; embryo periphericus, albumen farinaceum cingens, cotyledonibus linearibus planiusculis, radicula supera.—Herbæ v. fruticuli, erecti prostrati v. scandentes, lanati. Folia alterna opposita et pseudo-verticillata, linearia oblonga v. obovata, integerrima. Flores parvi v. minuti, in spicas terminales et axillares solitarias v. paniculatas dispositi, albi v. ferruginei.

Species ad 10, Asiæ et Africæ calidioris incolæ. *Moq. in DC. Prod.* xiii. ii. 299, *excl. sp. Gærtn. f. Fruct.* iii. *t.* 213.

Genus polymorphum etsi sat naturale. In *Æ. Monsonia*, Moq.; Wight, Ic. t. 725 (*Achyranthes*, male quoad filamenta) rami oppositi, divaricati, staminum cupula elongata ovarium compressum includens, ovarium vertice deciduo stigmate subsessili capitato, semen oblongum turgidum. In *Æ. javanica*, Juss., Wight, Ic. t. 876, flores fasciculati, dioici, lateralibus in fasciculo imperfectis, ♂ inter catervam speciminum scrutatorum a nobis haud detecti, et a Wallichio frustra quæsiti (cf. Fl. Ind. ed. Wall. et Car. ii. 495, *Achyranthes incana*), stylus elongatus, stigmatibus elongatis plumosis, semen reniforme; vix eadem species est var. δ *Boivini*, Moq., desertorum Arabiæ et Affghaniæ incola, floribus pariter dioicis sed minoribus, ♂ haud raris. In *Æ. lanata*, Juss. (an Wight Ic. t. 723? quæ potius *Æ. scandentis* forma), stylus breviter 2-fidus. In. *Æ scandente*, Wall.; Wight Ic. t. 724 (male quoad utriculum circumscissum et semen horizontale) folia alterna et stricte opposita, stigma capitellatum v. breviter 2-fidum. In *Æ. floribunda*, Wight, Ic. t. 1776 et 1776 A, folia omnia alterna et laciniæ inter stamina filamentis æquilongæ. In *Æ. congesta*, Balf. f. in Baker, Fl. Maurit. 267, insulæ Rodriguez incola, folia minima, perianthii minuti segmenta exteriora glaberrima, et staminum cupula brevissima.

29. **Calicorema**, *Hook. f. gen. nov.*—Flores subcapitati v. spicati, hermaphroditi, bracteati et 2-bracteolati. Perianthium dure coriaceum, 5-partitum, basi non aut modice induratum; segmenta dorso et marginibus pilis rectis sericeis albis scaberulis segmenta non excedentibus onusta, exteriora oblongo-lanceolata mutica 3-nervia, interiora angustiora. Stamina 5, filamentis filiformibus basi membrana tubulosa connexis, laciniis interpositis brevibus latis erosis; antheræ parvæ, breves, 2-loculares. Ovarium oblique obovoideum, glabrum, in stylum gracilem attenuatum, stigmate capitellato; ovulum ab apice funiculi elongati suspensum. Utriculus . . .—Frutex rigidus, ramosus, ramulis robustis

alternis teretibus lignosis, ultimis furfuraceo-tomentellis. Folia sparsa, parva, angusta, cylindracea, obtusa, glabra, carnosa, superne sulcata, ramulis angustiora. Flores ad apices ramulorum subspicatim dispositi, solitarii v. fasciculati, rhachi spicæ robusta; bracteæ et bracteolæ breves, cymbiformes, hyalinæ, perianthio pilis albis immerso multo breviores.

Species 1, *C. capitata*, Hook. f. (*Sericocoma capitata*, Moq. in DC. Prod. xiii. ii. 308, ubi ad genus novum dubitanter relata est). A *Sericocoma* differt floribus solitariis imperfectis 0, staminum tubo elongato et ovario glaberrimo. Flores illos *Chionothricis* in mentem revocant.

30. **Stilbanthus,** *Hook. f. in Hook. Ic. t.* 1286.—Flores hermaphroditi, bracteati et 2-bracteolati. Perianthium elongatum, coriaceo-scariosum, 5-partitum, basi non induratum; segmenta ovato-lanceolata, acuta, nervosa, dorso sub apice sericeo-barbata, exteriora latiora. Stamina 5, filamentis elongatis ciliolatis basi breviter connatis, laciniis interpositis iis æquilongis ligulatis penicillatis; antheræ didymæ, 2-loculares. Ovarium oblongum, compressum, apice penicillatum; stylus filiformis, stigmate capitellato; ovulum 1, oblongum, ab apice funiculi elongati pendulum. Utriculus perianthio inclusus, oblongus, apice villosus, membranaceus, indehiscens. Semen inversum, late oblongum, testa tenuiter coriacea brunnea, arillo 0; embryo (immaturus) periphericus, albumen cingens, cotyledonibus . . . radicula ascendente.—Arbor alte scandens, trunco robusto, ramulis herbaceis dependentibus obtuse 4-gonis foliisque pubescentibus. Folia opposita, petiolata, ampla, elliptico-ovata, caudato-acuminata, integerrima. Flores pro ordine magni, spicati, albi, splendentes, spicis pedunculatis in paniculas trichotome ramosas terminales ferrugineo-pubescentes dispositis; bracteæ bracteolæque late ovatæ, aristato-acuminatæ, scariosæ, nitidæ.

Species 1, Himalayæ orientalis incola.

31. **Achyranthes,** *Linn. Gen. n.* 288.—Flores hermaphroditi, bracteati et 2-bracteolati, demum deflexi. Perianthium rigide coriaceum, 4–5-partitum, demum induratum; segmenta subæqualia, subulato-lanceolata, aristato-acuminata, glabra v. pilosa, nitida, nervosa. Stamina 5, rarius 2 v. 4, filamentis filiformi-subulatis basi membrana connexis, laciniis interpositis quadratis erosis laceris v. dorso lamella laciniata instructis; antheræ oblongæ v. didymæ, 2-loculares. Ovarium oblongum v. lageniforme, subcompressum, glabrum; stylus filiformis, stigmate capitellato; ovulum 1, ab apice funiculi elongati suspensum. Utriculus perianthio inclusus, ovoideus v. oblongus, vertice rotundato v. areolato, membranaceus, indehiscens. Semen inversum, oblongum, testa tenuiter coriacea rufo-brunnea, arillo 0; embryo periphericus, albumen farinaceum cingens, cotyledonibus linearibus v. lanceolatis planis apice acutis incurvis radicula erecta latioribus.—Herbæ basi interdum frutescentes, erectæ v. basi decumbentes, glabræ tomentosæ v. sericeæ, ramis teretibus. Folia opposita, petiolata, ovata obovata v. lanceolata, integerrima. Flores in spicas elongatas graciles terminales simplices v. paniculatas dispositi, albi v. virescentes; bracteæ persistentes, membranaceæ; bracteolæ erectæ, in spinas leviter divergentes productæ.

Species ad 12, regionibus tropicis et calidis obviæ. *Moq. in DC. Prod.* xiii. ii. 311, *excl. sect.* i. *et* ii. *Gærtn. Fruct.* ii. *t.* 128 (*A. aspera*). *Lam. Illustr. t.* 168, *excl. f.* 2. *Benth. Fl. Austral.* v. 246. *A. Gray in Proc. Amer. Acad.* vii. 200. *Wight, Ic. t.* 722 (*male quoad bracteolas*), 1777 ad 1779. *A. sericea*, Kœn., est *Psilotrichi* species; *A. paludosa*, Bunb., est *Telanthera philoxeroides*. *A. arborescens*, Br., habitu et bracteolis breviter spinescentibus a congeneribus differt, necnon spicis brevibus rhachi flexuosa et floribus distichis patentibus vix reflexis. Centrostachys, *Wall. in. Roxb. Fl. Ind. ed. Carey*, ii. 497; *Moq. l. c.* 321; *Endl. Iconog. t.* 20; *Wight, Ic. t.* 1780, includit species 2 africanas et indicas laciniis inter filamenta dorso lamina fimbriata instructis, quod enim occurrit in *A. aspera* ex icone Wightii t. 1777.

32. **Pandiaka,** *Moq. in DC. Prod.* xiii. ii. 310 (Achyranthis *sect.*).—Flores hermaphroditi, bracteati et 2-bracteolati, bracteis et bracteolis chartaceis perianthium æquantibus. Perianthium angustum, breviter stipitatum, dure chartaceum, 5-partitum, basi demum induratum et 3-lobum; segmenta subulato-lanceolata, acuminata, pungentia,

pilosa, nervis obscuris. Stamina 5, filamentis filiformibus compressis basi membrana connexis, laciniis interpositis quadratis ciliatis v. nudis; antheræ lineari-oblongæ, 2-loculares. Ovarium oblongo-cylindraceum, vertice rotundatum v. truncatum incrassatum; stylus capillaris, stigmate minimo capitellato; ovulum 1, ab apice funiculi elongati suspensum. Utriculus subcylindraceus, perianthio indurato inclusus, membranaceus, vertice obliquo incrassato planiusculo v. cupulari, indehiscens. Semen inversum, subcubico-oblongum, extremitate radiculari in rostrum erectum laterale hilum in sinu fovens producto, testa tenuiter coriacea, arillo 0; embryo magnus, periphericus, albumen farinaceum cingens, cotyledonibus lanceolatis apicibus involutis concavis interiore angustiore, radicula erecta. —Herbæ erectæ, trichotome ramosæ, pubescentes v. villosæ. Folia opposita, sessilia, ovato-oblonga v. linearia, acuta, integerrima. Flores majusculi, in capitula v. spicas oblongas terminales densifloras foliaceo-involucratas dispositi, albi, erecti v. patentes, nunquam deflexi.

Species 3, Africæ tropicæ incolæ. Includit *Achyranthem Heudelotii* et *involucratam*, Moq., et *Cyathulam cylindricam*, Schweinf. Pl. Cent. Afr. No. 1542 (non Moq.).

33. **Achyropsis,** *Moq. in DC. Prod.* xiii. ii. 310 (Achyranthis *sect. partim*).—Flores hermaphroditi, bracteati et 2-bracteolati. Perianthium rigide coriaceum, glabrum, 4-5-partitum, basi non induratum; segmenta oblonga, subacuta, enervia, nitida. Stamina 4-5, filamentis subulatis basi membrana connexis, laciniis interpositis quadratis erosis v. breviter fimbriatis; antheræ didymæ, 2-loculares. Ovarium late ovoideum v. oblongum, compressum, glabrum, in stylum brevem v. subelongatum attenuatum, stigmate capitellato; ovulum 1, ab apice funiculi elongati suspensum. Utriculus perianthio inclusus, late ovoideus, compressus, membranaceus, indehiscens. Semen inversum, oblongo-rotundatum, testa tenuiter coriacea brunnea albumini carnoso adhærente, arillo 0; embryo periphericus, cotyledonibus planis radicula ascendente paulo latioribus.—Fruticuli erecti, tenuiter sericeo-puberuli, trichotome ramosi, ramis strictis sulcatis. Folia opposita et fasciculata, lineari-obovata, obtusa, basi angustata, integerrima, nervis inconspicuis. Flores parvi, albi, spicati, spicis axillaribus et in paniculas terminales trichotome ramosas dispositis; bracteæ membranaceæ, acuminatæ, bracteolæ obtusæ.

Species 3, Africæ australis incolæ. Genus habitu, bracteis non spinescentibus, floribusque non deflexis ab *Achyranthe* omnino distinctum. Includit *A. albam*, Eckl. et Zeyh., *A. leptostachyam*, E. Mey., et *A. acicularem*, E. Mey.

34. **Nyssanthes,** *R. Br. Prod.* 418.—Flores hermaphroditi, bracteati et 2-bracteolati, bracteis bracteolisque patentibus longe gracile spinescentibus. Perianthium rigidum, 4-partitum, demum induratum; segmenta subulato-lanceolata, glabra v. puberula, exteriora v. omnia longe aciculari-spinescentia, interiora minora. Stamina 2 v. 4, filamentis basi in cupulam connatis, laciniis interpositis late oblongis truncatis glabris v. ciliatis; antheræ breves, 2-loculares. Ovarium oblongum; stylus breviusculus, stigmate capitellato; ovulum 1, ab apice funiculi elongati suspensum. Utriculus perianthio indurato inclusus, globosus v. ovoideus, vertice indurato dilatato depresso, tenuiter membranaceus, indehiscens. Semen inversum, testa tenuiter crustacea fusca nitida, arillo 0, embryo . . . —Herbæ annuæ v. biennes, pubescentes, ramosi, ramis oppositis patentibus, ramulis teretiusculis ad axillas foliosis. Folia opposita, sessilia v. petiolata, ovata, acuta v. obtusa, integerrima. Flores virides, in capitula pauciflora sessilia axillaria dispositi, stellatim patentes v. reflexi; bracteæ et bracteolæ divaricatæ.

Species 2, Australiæ orientalis incolæ. *Benth. Fl. Austral.* v. 246. Semina a nobis non visa.

TRIBUS III. GOMPHRENEÆ.

35. **Guilleminea,** *H. B. et K. Nov. Gen. et Sp.* vi. 40, *t.* 518.—Flores hermaphroditi, bracteati et 2-bracteolati, bracteis bracteolisque subæqualibus. Perianthium campanulatum, lanuginosum, tubo obconico, limbo 5-lobo; lobi æquales, ovati v. subulati, membranacei v. subrigidi. Stamina 5, perigyna, basi loborum perianthio inserta, filamentis

brevibus triangulari-subulatis basi brevissime connatis, laciniis interpositis 0; antheræ minutæ, ovoideæ, 1-loculares. Ovarium ovoideo-oblongum, compressum; stylus brevis, stigmate emarginato; ovulum 1, ab apice funiculi elongati suspensum. Utriculus membranaceus, indehiscens. Semen inversum, lenticulare v. compresso-globosum, testa lævi coriacea; embryo annularis, albumen farinaceum cingens, radicula supera.—Herbæ radice perennante, prostratæ, ramosæ, lanatæ, foliosæ. Folia opposita, ovata, integerrima, petiolis basi connatis. Flores minuti, in axillis foliorum congesti, lana immersi, sessiles v. breviter pedicellati; bracteæ bracteolæque hyalinæ.

Species 3 (an unius varietates?): 1. *G. illecebroides*, H. B. et K. (*G. densa*, Moq. in DC. Prod. xiii. ii. 338), Andium a Peruvia ad Novam Mexico incola. 2. *G. lanuginosa*, Moq. l. c. (*Gossypianthus*), præcedenti valde affinis sed lobis perianthii angustioribus, Americæ a Texas ad provincias Argentinas incola. 3. *G. australis*, Hook. f. (*Gossypianthus australis*, Griseb. Pl. Lorentz. 35, t. 1, f. 2); staminodia a Grisebachio in *G. australi* descripta et depicta a nobis non visa.

36. **Cladothrix**, *Nutt. in Herb. Hook.*—Flores minuti, hermaphroditi, bracteati et 2-bracteolati, bracteis bracteolisque hyalinis. Perianthium teres, sparse stellatim pilosum, 5-partitum; segmenta æqualia, oblonga, obtusiuscula, 1-nervia, scarioso-membranacea. Stamina 5, hypogyna, filamentis in cupulam brevem connatis, laciniis interpositis 0 v. minutis; antheræ magnæ, lineari-oblongæ, 1-loculares. Ovarium globosum, in stylum brevem attenuatum, stigmate capitato simplici v. 2-lobo, ovulum 1, ab apice funiculi capillaris suspensum. Utriculus . . .—Fruticuli v. herbæ ramosæ, stellatim tomentosæ, ramulis erectis v. prostratis. Folia opposita, breviter petiolata, integerrima, ovata v. obovata, orbicularia, utrinque tomentosa. Flores minuti, in axillis foliorum pauci, congesti, tomento immersi; bracteæ parvæ, apices versus pilis ramosis barbatæ.

Species 2, regionis Mexicano-Texanæ et Californiæ incolæ. *Moq. in DC. Prod.* xiii. ii. 359 (*Alternantheræ sect.*). *S. Wats. Bot. Calif.* ii. 43 *ined.* *Torr. in Emory Rep.* 199 (*Alternantheræ sect. Endotheca*). Utriculus a nobis non visus, ex Moq. l. c. calycem duplo superans, ovatus, compressiusculus, glaber, semine subtriangulari-ovato margine obtusissimo flavescente. Staminodia ex Wats. l. c. interdum minuta.

37. **Pfaffia**, *Mart. Nov. Gen. et Sp.* ii. 20, *t.* 122 *ad* 124.—Flores hermaphroditi, rarius polygami, bracteati et 2-bracteolati, capitati v. rarissime spicati, capitulis solitariis longe pedunculatis. Perianthium intra bracteolas sessile, teretiusculum v. leviter compressum, 5-partitum; segmenta subæqualia, pilis rectis v. tortuosis sericea v. lanata. Tubus stamineus elongatus, ad medium versus 5-fidus, laciniis antheriferis margine ciliatis apice erosis fimbriatis v. 2-fidis, anantheris interpositis 0; antheræ ad apices laciniarum sessiles v. breviter stipitatæ, lineari-oblongæ, 2-loculares. Ovarium ovoideum, stigmate sessili discoideo v. capitellato integro v. 2-lobo; ovulum 1, ab apice funiculi elongati suspensum. Utriculus ovoideus, membranaceus, indehiscens. Semen inversum, turgide lenticulare, hilo emarginato, testa coriacea brunnea lævi; embryo annularis, albumen farinaceum cingens, cotyledonibus linearibus v. dilatatis, radicula supera.—Herbæ graciles, erectæ, tomentosæ v. villosæ, rarius glabratæ. Folia opposita, sessilia v. subsessilia, integerrima. Capitula v. spicæ densifloræ; bracteæ bracteolæque hyalinæ.

Species ad 15, Brasilianæ. *Moq. in DC. Prod.* xiii. ii. 387 (*Gomphrenæ sect.*). *Seub. in Mart. Fl. Bras.* v. i. 194, *t.* 58 *ad* 60 (*Gomphrena*). Cotyledones in *P. jubata* latissimæ.

Sertuernera, *Mart. Nov. Gen. et Sp.* ii. 36, *t.* 136 *ad* 138; *Moq. in DC. Prod.* xiii. ii. 383 (*Gomphrenæ sect.*), a *Pfaffia* nullo charactere differt nisi floribus polygamo-monoicis.

38. **Mogiphanes**, *Mart. Nov. Gen. et Sp.* ii. 29, *t.* 129 *ad* 135.—Flores hermaphroditi, bracteati et 2-bracteolati, capitati, capitulis pedunculatis basi nudis v. foliis 2 involucratis. Perianthium intra bracteolas distincte stipitatum, teretiusculum, 5-partitum; segmenta rigida, acuminata, nervosa, lana non involuta. Tubus stamineus 10-fidus, laciniis 5 alternis subulatis antheriferis, 5 alternis anantheris ligulatis apice erosis v. fimbriatis margine nudis v. rarissime fimbriatis; antheræ oblongæ, 1-loculares. Ovarium ovoideum v. obovoideum; stylus manifestus, stigmate capitellato; ovulum 1, ab apice funiculi

elongati suspensum. Utriculus ovoideus v. oblongus, membranaceus, vertice interdum cupulari v. annulato, indehiscens. Semen inversum, oblongum v. lenticulare, testa coriacea nitida; embryo annularis, albumen farinaceum cingens, radicula supera.—Herbæ, sæpius erectæ, ramosæ, pilosæ villosæ v. pubescentes. Folia opposita, breviter petiolata, integerrima, membranacea, sæpius lanceolata et acuminata. Capitula globosa, rarius subcylindracea, pedunculis sæpe elongatis. Perianthii stipes teretiusculus v. 5-gonus, cum basi ejus continuus v. articulatus; bracteolæ nunc cymbiformes perianthio breviores, nunc complicatæ dorso cristatæ v. alatæ, perianthium æquantes v. superantes.

Species ad 10, Americanæ tropicæ. *Moq. in DC. Prod.* xiii. ii. 378 (*Telantheræ sect.*). *Griseb. Fl. Brit. W. Ind.* 64. *Seub. in Mart. Fl. Bras.* v. i. 178 (*Telantheræ sect.*). *Chapm. Fl. S. U. St.* 383 (*Telantheræ sp. n.* 3 *et* 4). *Jacq. Ic. Rar. t.* 346 (*Gomphrena*).

39. **Telanthera**, *R. Br. in Tuckey, Congo*, 477, *in nota.* (Teleianthera, *Endl. Gen.* 301.)—Flores hermaphroditi, bracteati et 2-bracteolati, capitati, capitulis axillaribus sessilibus rarius pedunculatis v. terminalibus globosis v. oblongis. Perianthium intra bracteam sessile, nunc a dorso compressum, ambitu subtrigonum, basi incrassatum, lana non involutum, 5-partitum, segmentis valde inæqualibus coriaceis, antico et 2 posticis subplanis, 2 lateralibus interioribus minoribus genitalia includentibus, nunc subteres, segmentis æqualibus. Tubus stamineus 10-fidus, laciniis 5 alternis subulatis antheriferis, 5 alternis anantheris longioribus ligulatis margine fimbriatis v. nudis apice erosis v. laceris; antheræ oblongæ v. cylindraceæ, 1-loculares. Ovarium globosum v. ovoideum; stylus manifestus, stigmate capitato; ovulum 1, ab apice funiculi elongati suspensum. Utriculus obovoideus, membranaceus, indehiscens. Semen inversum, lenticulare, testa coriacea lævi; embryo annularis, albumen farinaceum cingens, cotyledonibus compressis, radicula supera.—Herbæ, rarius suffrutices, erecti prostrati v. repentes, glabri pubescentes v. tomentosi, pilis interdum stellatis. Folia opposita, sessilia v. petiolata, ovata oblonga v. linearia, sæpius crassiuscula. Capitula densiflora, rarissime terminalia, solitaria v. fasciculata. Flores sæpissime parvi, albi rarius colorati; bracteæ et bracteolæ perianthio breviores, coriaceæ.

Species ad 45, Americæ calidioris incolæ, quarum una etiam in Africa occidentali incola. *Moq. in DC. Prod.* xiii. ii. 362. *Seub. in Mart. Fl. Bras.* v. i. 168 (*excl. ex utraque sectione Mogiphani*).

Genus in sectiones 2 sequentes dividitur:—

1. *Bucholtzia*, cui pertinet species typica *T. maritima*, *Br.* Capitula sæpius in axillis sessilia. Perianthium ambitu subtrigonum, segmentis 2 interioribus minoribus. *Griseb. Fl. Brit. W. Ind.* 67 (*Alternanthera sect. excl. A. achyranthi*). *L'Hérit. Stirp. Nov. t.* 37 (*Illecebrum*). *Lam. Illustr. t.* 168, *f.* 2 (*Achyranthes*). *Seub. in Mart. Fl. Bras.* v. i. *t.* 53, 54. *Anders. in Eugen. Resa, Bot. t.* 4, 5. Bucholtzia, *Mart. Nov. Gen. et Sp.* ii. 49 *t.* 147 *ad* 151. Steiremа, *Raf. ex Moq. T. albida*, Moq. (*Alternanthera tomentella*, Seub.) et *T. peruviana*, Moq., laciniis anantheris tubi staminei brevibus, ad *Alternantheram* accedunt. *T. minutiflora*, Seub., a sectione differt habitu et perianthio teretiusculo segmentis omnibus subæqualibus concavis. *T. philoxeroides* et *T. prælonga*, Moq., inflorescentia et perianthiis ad sectionem sequentem transferendæ sunt.

2. *Brandesia*. Capitula plus minus longe pedunculata; flores longiores, perianthii segmentis subæqualibus. *Seub. in Mart. Fl. Bras.* v. i. *t.* 51, 52. *Bot. Mag. t.* 830 (*Achyranthes*). *Andr. Bot. Rep. t.* 380 (*Achyranthes*). Brandesia, *Mart. Nov. Gen. et Sp.* ii. 25, *t.* 125 *ad* 128.

40. **Alternanthera**, *Forsk. Fl. Æg. Arab.* 28.—Flores hermaphroditi, bracteati et 2-bracteolati, capitati, capitulis axillaribus sessilibus. Perianthium intra bracteas sessile, a dorso compressum, 5-partitum; segmenta inæqualia, antico et 2 posticis planis, 2 lateralibus interioribus concavis genitalia includentibus. Tubus stamineus varius, brevis, cupularis, laciniis 2–5 subulatis antheriferis, anantheris interpositis totidem v. 0; antheræ breves v. elongatæ, 1-loculares. Ovarium orbiculare v. obovoideum; stylus brevis v. 0, stigmate capitellato rarius brevissime 2-cruri; ovulum 1, ab apice funiculi elongati pendulum. Utriculus compressus, ovoideus v. orbiculari-obcordatus, sæpe marginibus incrassatis late alatus. Semen inversum, lenticulare, testa coriacea lævi; embryo annularis, albumen farinaceum cingens, cotyledonibus angustis, radicula supera.—Herbæ prostratæ

v. decumbentes rarius erectæ, ramosæ, glabræ pubescentes v. tomentosæ. Folia opposita, sessilia v. petiolata, obovata oblonga v. linearia, integerrima v. obscure denticulata. Capitula parva, interdum in massam globosam dense congesta. Flores parvi, sæpissime albi, oblongi v. lanceolati; bracteæ bracteolæ et perianthii segmenta obtusa acuta v. longe aciculari-acuminata.

Species ad 16, tropicæ et subtropicæ, maxima copia in Australia et America tropica vigentes. *Moq. in DC. Prod.* xiii. ii. 354 (*excl. sect.* 1 *et* 2). *Seub. in Mart. Fl. Bras.* v. i. 182, *t.* 55 *ad* 57 (*excl. sect.* 2). *Benth. Fl. Austral.* v. 248. *Beauv. Fl. Owar. et Ben. t.* 99, 104. *Wight, Ic. t.* 727. *Webb, Phytog. Canar. t.* 199. *Mart. Nov. Gen. et Sp.* ii. *t.* 152.

Genus a *Telanthera* distinguendum cupula staminea semper brevi, laciniis inter filamenta interpositis dum adsint semper brevibus, et stylo brevissimo. Species Australienses, *A. nodiflora*, *A. denticulata*, *A. nana* et *A. angustifolia* bene cum typo generico conveniunt; *A. polycephala*, Benth. (*A. angustifolia*, Moq. non. Br.) est *Ptiloti* species (*P. macrotrichus*, F. Muell.). *A. decipiens*, Benth., *A. leptophylla*, Benth., et *A.*? *longipes*, Benth., sunt stirpes quoad genus valde dubiæ.

Allaganthera, *Mart. Hort. Erlang.* 69, *ex Moq.* ad *A. sessilem*, Br., conditum fuit.

Lithophila, *Swartz, Fl. Ind. Occ.* i. 47, *t.* 1; *Griseb. Fl. Brit. W. Ind.* 66, differt tantum staminibus 2 oppositis (rarissime 3) stylisque 2 brevibus. Includit species 4, habitu diversas, quarum una Antillana, *L. muscoides*, Sw., capitulis terminalibus et axillaribus cylindraceis pedunculatis, et tres Galapagenses, filamentis in cupulam simplicem v. dentatam ovario breviorem basi connatis: *A. radicata*, Hook. f., et *A. subscaposa*, radicibus crassis foliis rosulatis omnibus radicalibus; et *A. scirpoides*, Hook. f., caulibus scapiformibus semipedalibus nudis crassis culmum *Scirpi* in mentem revocantibus, capitulis terminalibus congestis.

41. **Gossypianthus**, *Hook. Ic. Pl. t.* 251.—Flores hermaphroditi, axillares, congesti, bracteati et 2-bracteolati; bracteæ bracteolæque subæquales, hyalinæ. Perianthium teres, lanuginosum, 5-partitum; segmenta æqualia, lanceolata et acuminata, v. elongato-spathulata et obtusa, subrigida. Stamina 5, filamentis subulatis in cupulam brevem connatis, laciniis interpositis 0; antheræ parvæ, oblongæ, 1-loculares. Ovarium ovoideum v. oblongum, compressum; stylus brevis, stigmate emarginato; ovulum 1, ab apice funiculi elongati suspensum. Utriculus ovoideo-oblongus, membranaceus, indehiscens. Semen inversum, lenticulare, hilo emarginato, testa pallida tenuiter crustacea brunnea nitida lævi; embryo annularis, albumen farinaceum cingens, radicula supera.—Herbæ radice perennante, lanatæ, ramosæ, rarius prostratæ. Folia radicalia rosulata, lineari-oblonga, caulina ovata v. lanceolata, integerrima. Flores minuti, in axillis foliorum congesti, lana immersi, non stricte capitati.

Species 2, regionis Mexicano-Texanæ incolæ. *Moq. in DC. Prod.* xiii. ii. 337, quoad species 2 priores. *G. lanuginosus*, Moq., et *G. australis*, Griseb., ad *Guilleminеam* pertinent. *G. tomentosus*, Griseb. Pl. Lorentz., est *Gomphrena demissa*, Mart., species *G. Martianæ*, Moq. (*Philoxero heliotropifolio*, Griseb.) valde affinis. Genus *Gossypianthus* ab *Alternanthera* separatur habitu et floribus teretibus in axillis foliorum congestis nec vere capitatis.

42. **Woehleria**, *Griseb. Pfl. Trop. Amer.* 11. —Flores hermaphroditi, capitellati, bracteati et 2-bracteolati, intra bracteas sessiles. Perianthium teres, glabrum, basi non induratum, 4-partitum; segmenta oblonga, obtusa, subæqualia, 3-costata, chartacea, alba. Stamen 1, unilaterale, filamento cuneiformi 3-lobo, lobis triangularibus, intermedio longiore antherifero; anthera parva, oblonga, 1-locularis. Ovarium late ovoideum, compressum, stigmatibus 2 subulatis recurvis; ovulum 1, ab apice funiculi elongati pendulum. Utriculus late oblongus, membranaceus, hyalinus, indehiscens. Semen inversum, lenticulari-reniforme, testa tenuiter crustacea lævi nitida; embryo annularis, albumen farinaceum cingens, cotyledonibus linearibus radicula supera vix latioribus.—Herba pusilla, tenuissima, glaberrima, repens, facie *Alsinis*, ramis filiformibus intertextis. Folia opposita, petiolata, orbicularia, membranacea. Flores minuti, in capitula pedunculata oblonga terminalia dispositi; bracteæ bracteolæque minutæ, consimiles, ovatæ, obtusæ, perianthio multo minores, rhachi adhærentes.

Species 1, Cubensis. Bracteæ et bracteolæ rhachi adhærentes in generibus affinibus non observantur.

43. **Philoxerus**, *R. Br. Prod.* 416 (*excl. sp. n.* 1).—**Flores hermaphroditi, capitati, dense imbricati, bracteati et 2-bracteolati. Perianthium a dorso compressum, basi incrassatum et in stipitem spongiosum crassum v. angustum productum, 5-partitum; segmenta oblonga, obtusa, chartacea, nervosa. Stamina 5, filamentis in cupulam brevem connexis subulatis, laciniis interjectis 0; antheræ oblongæ, 1-loculares. Ovarium late ovoideum, compressum; stylus brevissimus, stigmatibus 2 subulatis; ovulum 1, ab apice funiculi elongati suspensum. Utriculus late ovoideus, compressus, tenuiter coriaceus, indehiscens. Semen inversum, lenticulare, testa coriacea lævi; embryo annularis, albumen farinaceum cingens, cotyledonibus angustis, radicula supera.—Herbæ prostratæ, glabræ v. rarius tomentosæ, sæpius crassiusculæ v. carnosulæ, ramis teretibus v. angulatis. Folia opposita, obovato-spathulata oblonga v. linearia, integerrima, axillis interdum barbatis. Capitula axillaria et terminalia, globosa, oblonga v. cylindracea, alba, sessilia v. pedunculata; bracteæ chartaceæ, bracteolæ carinatæ.**

Species ad 10, littorales, Americæ tropicæ orientalis, Africæ occidentalis, Australiæ et ins. Loochoo incolæ. IRESINIS sect., *Endl. Gen. Pl.* 301. *Moq. in DC. Prod.* xiii. ii. 339 (*excl. specibus pluribus jam a Benthamio ad Gomphrenam relatis*). Species includendæ sunt *P. vermicularis*, Br. (Beauv. Fl. Ow. et Ben. t. 98, f. 1). *P. aggregatus*, H. B. et K. *P. carnosus* (*Telanthera philoxeroides, var. carnosa*, Moq.). *P. maracaybensis*, Klotzsch in Herb. Hook. *P. parviflorus* (*Gomphrena*, Benth. Fl. Austral.). *P. diffusa*, Spr. (*Gomphrena*, Benth. l. c.; *Iresine Brownii*, Moq.), species pubescens, stipite perianthii minuto styloque elongato, et *P. Wrightii*, Hook. f., species parvula ex ins. Loochoo (Herb. Wright, no. 240). His verisimiliter addendæ sunt species sequentes nobis incognitæ, *P. surinamensis*, Miq.; *P. crassifolius*, H. B. et K.; et *P. portulacoides*, St. Hil. *P. heliotropifolius*, Griseb., est *Gomphrena Martiana*, Moq.

44. **Gomphrena**, *Linn. Gen. n.* 314.—Flores hermaphroditi, bracteati et 2-bracteolati, capitati, rarissime spicati. Perianthium intra bracteolas sessile, compressum v. teretiusculum, 5-partitum v. 5-fidum, basi sæpissime lanatum; segmenta inæqualia v. subæqualia, lanceolata, acuminata, concava, rarius plana et obtusa. Tubus stamineus elongatus, inclusus v. exsertus, 5-fidus, lobis laciniisve apice emarginatis v. 2-fidis, alternis interpositis sæpissime 0; antheræ in sinu apicali laciniarum v. loborum sessiles v. stipitatæ, oblongæ v. lineares, 1-loculares. Ovarium turbinatum v. subglobosum; stylus brevis v. elongatus, stigmatibus 2 rarissime 3 subulatis v. filiformibus, v. stigmate 2-lobo; ovulum 1, ab apice funiculi elongati suspensum. Utriculus ovoideus v. oblongus, compressus, interdum basi induratus. Semen inversum, lenticulare, testa coriacea lævi; embryo albumen farinaceum cingens, annularis cotyledonibus angustis, v. periphericus cotyledonibus obovatis, radicula gracili supera.—Herbæ erectæ v. prostatæ, ramosæ, articulis sæpe tumidis, hirsutæ v. villosæ. Folia opposita, sessilia v. breviter petiolata, integerrima. Capitula parva v. magna, nuda v. basi foliis involucrata, in speciebus perplurimis ad apices ramorum solitaria, sessilia. Flores breves v. elongati, albi v. colorati; bracteolæ breves v. elongatæ, concavæ, carinatæ v. dorso alatæ v. cristatæ.

Species ad 70, perplurimæ Americæ calidioris et Australiæ incolæ; una late per Asiam et Africam tropicam dispersa. *Moq. in DC. Prod.* xiii. ii. 391 (*sect. Wadapus partim, et Xerosiphon*). *Mart. Nov. Gen. et Sp.* ii. *t.* 101 *ad* 119. *Seub. in Mart. Fl. Bras.* v. i. 199, *t.* 62 *ad* 67 (*sect. Gomphrenula partim, Cristularia, Stachyanthus, et Xerophyton*). *Benth. Fl. Austral.* v. 252 (*excl. sp. n.* 13 *et* 14). *Griseb. Pl. Lorentz.* 32; *Symb. Fl. Argent.* 33. *St. Hil. Pl. Us. Bras. t.* 31, 32. *Torr. Bot. Emory Exped.* 181. *Wight Ic. t.* 1784. *Jacq. Hort. Schœnb.* iv. *t.* 482. *Bot. Mag. t.* 2614, 2815, 4064. BRAGANTIA, *Vand. Fasc. Pl. Nov.* (1771) 6, *ed.* 2 *in Roem. Script.* 50, *non Lour.* SCHULTESIA, *Schrad. in Gœtt. Gelehrt. Anz.* 1821, 708 *ex Mart.* Tubus stamineus in speciebus Americanis et paucis Australiensibus elongatus, 5-fidus, laciniis interpositis 0; in aliis Australiensibus in 'Flora Australiensi' bene descriptis tubus polymorphus est, nunc cupularis, v. ut in *Telanthera* dentibus laciniisve anantheris interpositis, v. filamenta brevia subulata basi remota in cupulam membranaceam connexa. *G. parviflora*, Benth., et *G. diffusa*, Spreng., sunt *Philoxeri* species.

XEROSIPHON, *Turcz. in Bull. Soc. Imp. Nat. Mosc.* 1843, 55; *Mart. Nov. Gen. et Sp.* ii. *t.* 121 (*Gomphrena*), sectionem efficit perianthii angustissimi segmentis ad medium connatis, stylo brevissimo, stigmatibus 2, in una specie brevibus, in altera in unum conicum coadunatis.

CHNOANTHUS, *Philippi in Ann. Univ. Chili* 1862, ii. 405, *ex Linnæa* xxxiii. 223, Mendosæ incola, est verisimiliter *Gomphrenæ* species, *G. demissæ*, Moq. affinis.

45. **Frœlichia,** *Mœnch. Meth.* 50.—Flores hermaphroditi, spicati, bracteati et 2-bracteolati, lana involuti. Perianthium intra bracteas sessile, teretiusculum, ad medium v. altius fissum, tubo demum indurato et longitrorsum cristato; lobi lanceolati, acuti, glabri. Tubus stamineus elongatus, apice 5-fidus, lobis brevibus v. elongatis obtusis; antheræ in sinubus inter lobos sessiles, 1-loculares. Ovarium ovoideum; stylus subelongatus stigmate capitellato, v. stigma sessile penicillatum; ovulum 1, ab apice funiculi elongati suspensum. Utriculus tubo indurato v. incrassato 2-alato v. -cristato perianthii inclusus, ovoideus, membranaceus, indehiscens. Semen inversum, lenticulare v. sub-obpyramidatum, testa coriacea brunnea lævi; embryo annularis, albumen farinaceum cingens, radicula supera.—Herbæ annuæ v. perennes? erectæ, sæpius sericeo-tomentosæ, caulibus simplicibus v. ramosis articulatis. Folia opposita, sessilia v. radicalia petiolata, ovata lineari-oblonga v. spathulata, integerrima. Spicæ sessiles v. pedicellatæ, interdum interruptæ. Flores parvi, bracteolis membranaceis involuti.

Species ad 10, Americæ calidioris a Texas ad Brasiliam australem incolæ. *Moq. in DC. Prod.* xiii. ii. 419. *Seub. in Mart. Fl. Bras.* v. i. 163, *t.* 50. *Anderss. in Eugen. Resa, Bot. t.* 3, 4. *Jacq. Ic. Rar.* 1, *t.* 5 (*Celosia*). *L'Hér. Stirp. t.* 3 (*Gomphrena*).

Genus in sectiones 2 dividitur:—

1. *Hoplotheca.* Stylus manifestus, stigma capitellatum. OPLOTHECA, Nutt. Gen. Am. ii. 78. *Mart. Nov. Gen. et Sp.* ii. 47, *t.* 146. *Hook. Ic. Pl. t.* 256. *Bot. Mag. t.* 2603. HOPLOTHECA, *Spreng. Syst. Cur. Post.* 52.

2. *Dilopha.* Stigma sessile, penicillatum.

F. nudicaule, Hook. f., species Galapagensis, a congeneribus differt ramis dichotomis nudis, et spicis terminalibus. An genus novum?

46. **Hebanthe,** *Mart. Nov. Gen. et Sp.* ii. 42, *t.* 140 *ad* 145.—Flores hermaphroditi v. polygamo-dioici, bracteati et 2-bracteolati, capitati v. spicati, capitulis spicisve pedunculatis in ramos oppositos paniculæ brachiatæ verticillatis. Perianthium intra bracteolas sessile, teretiusculum, lanatum v. longe sericeum, 5-partitum; segmenta æquilonga, lineari-oblonga, obtusa v. subacuta, 3–5-nervia. Tubus stamineus 5-fidus, laciniis antheriferis nunc linearibus apice 2-cruribus anantheris interpositis 0, nunc subulatis anantheris interpositis brevibus v. subquadratis v. 0; antheræ oblongæ v. ellipsoideæ, 1-loculares. Ovarium ovoideum v. globosum; stigmate capitato 2-lobo v. 2-cruri; ovulum 1, ab apice funiculi elongati suspensum. Utriculus ovoideus, membranaceus, indehiscens. Semen inversum, lenticulare, testa coriacea lævi; embryo albumen farinaceum cingens, v. annularis cotyledonibus angustis, v. periphericus cotyledonibus latis tenuibus concavis, radicula gracili supera.—Herbæ v. suffrutices erecti v. scandentes, ramis elongatis gracilibus patentibus, glabri v. inflorescentia præsertim tomentosa, rarius sericei v. villosi. Folia opposita, petiolata, ovata v. lanceolata, integerrima, subtus interdum sericea. Capitula v. spicæ parvæ, basi nudæ. Flores parvi, patentes, lanati.

Species ad 20, Americæ tropicæ incolæ. Genus in sectiones sequentes dividitur:—

1. *Euhebanthe.* Flores spicati. Perianthii segmenta 2 exteriora glabra pubescentia v. villosa, 3 interiora copiosissime et longe lanata, pilis flexuosis. *Moq. in DC. Prod.* xiii. ii. 385 (*Gomphrenæ sect.*). *Seub. in Mart. Fl. Bras.* v. i. 191 (*Gomphrenæ sect.*). *Hook. Ic. Pl. t.* 102 (*Iresine*).

Hæc sectio formas 3 præbet:—

a. Laciniæ antheriferæ subulatæ, anantheris interpositis geminis, v. laciniæ profunde 2-crures, antheris in sinubus insertis. *H. paniculata*, Mart. Nov. Gen. et Sp. ii. t. 140 et 142. *H. pulverulenta*, Mart. l. c. t. 144, 145. *H. spicata*, Mart. l. c. t. 141, 142. *H. virgata*, Mart. l. c. t. 143, 145.

b. Laciniæ antheriferæ subulatæ, anantheris interpositis solitariis elongatis. *Fendl. Pl. Venez. n.* 1069, 1076, et species 2 mexicanæ.

c. Laciniæ antheriferæ subulatæ, basi triangulares, anantheris interpositis 0. *H. paniculata*, Moq. (*Gomphrena*) non Mart. (Guiana, Rob. Schomb. n. 550, Spruce n. 4933). *H. decipiens*, H. f. (*Iresine grandiflora*, Hook.; *Alternanthera grandiflora*, Moq.). *H. pulverulenta*, Moq. non Mart. (Mexico, Galeotti, no. 7160). *H. guianensis*, Klotzsch (Rich. Schomb. n. 1527), aliæque.

2. *Gomphrenoides*. Flores majusculi, capitati, capitulis sæpius pedunculatis. Perianthii segmenta pilis erectis sericeis. Tubi staminei laciniæ antheriferæ latæ, 2-crures, anantheris interpositis 0. Stigma breviter 2-lobum. Folia subtus pilis laxis sericea. *H. vaga*, Mart. Nov. Gen. et Sp. ii. t. 120 (*Gomphrena*). *H. holosericea*, Mart. (Seub. in Mart. Fl. Bras. v. i. t. 61, *Gomphrena*). *H. argenteo-sericea*, Hook. f. (Gardn, Herb. Bras. n. 2716).

3. *Tromsdorffia*. Flores capitati. Perianthii segmenta basi pilis strictis sericeis segmenta æquantibus. Filamenta basi tubo brevissimo membranaceo connexa, laciniis interjectis 0, v. quadratis v. triangularibus. *Moq. in DC. Prod.* xiii. ii. 350 *et Seub. in Mart. Fl. Bras.* v. i. 186 (*Alternantheræ sect.*). TROMSDORFFIA, *Mart. Nov. Gen. et Sp.* ii. 40, *t.* 139. Præter speciem Martiusanam *H. auratam*, huc pertinent *H. parviflora*, Benth. et specimina Trianæ, n. 356, e Columbia; Fendleri, n. 1071, e Venezuela; et planta a Spruceo prope Tarapoto lecta.

47. **Iresine,** *Linn. Gen. n.* 1113 (Xerandra, *Raf. ex Moq.*).—Flores hermaphroditi v. dioici, minuti, bracteati et 2-bracteolati, paniculati v. in glomerulos secus ramos paniculæ sparsos dispositi. Perianthium teres, intra bracteolas sessile, basi non induratum, sæpissime nitidulum, longe lanatum v. subnudum, 5-partitum; segmenta ovato-oblonga, acuta v. subacuta, sæpissime hyalina. Stamina 5, filamentis subulatis basi membrana brevi connexis, laciniis anantheris interpositis 0 v. brevibus latis triangularibus v. quadratis; antheræ oblongæ, 1-loculares; in fl. ♀ staminodia 5 v. 0. Ovarium in fl. ♂ 0, in ♀ compressum; stylus brevissimus v. 0, stigmatibus 2 rarissime 3 subulatis divaricatis; ovulum 1, ab apice funiculi elongati suspensum. Utriculus orbicularis, compressus, membranaceus, indehiscens. Semen inversum, lenticulare v. subreniforme, testa tenuiter crustacea nitida; embryo annularis, albumen farinaceum cingens, cotyledonibus angustis, radicula supera.—Herbæ erectæ v. suffrutices sarmentosi, glabri tomentosi v. pubescentes. Folia opposita, petiolata, integerrima v. serrulata. Paniculæ amplæ, ramis sæpissime verticillatis gracillimis. Flores interdum valde minuti, bracteæ et bracteolæ hyalinæ. Semen in speciebus variis minutissimum.

Species ad 18, Americæ tropicæ et subtropicæ incolæ. *Moq. in DC. Prod.* xiii. ii. 344 *et* 350 (*Iresinis sect. Iresiniastrum, cum speciebus variis Alternantheræ sect. Tromsdorffiæ*). Genus *Hebanthi* valde affine, distinguitur stylis 2 subulatis, semine minuto lenticulari, cotyledonibus semper angustis, in sectiones sequentes dividitur:—

1. *Euiresine*. Herbæ erectæ v. subscandentes, flaccidæ. Flores dioici, in spiculas multiplicato-paniculatas dispositi. Laciniæ inter filamenta minimæ v. 0. *I. celosioides*, Linn. (*I. polymorpha*, Mart. Nov. Gen. et Sp. ii. 56, t. 153, 154). *I. Herbstii*, Hook. Bot. Mag. t. 5499, aliæque.

2. *Rosea*. Suffrutices sarmentosi v. scandentes, rarius erecti. Flores hermaphroditi polygamo-dioici v. dioici. Laciniæ inter filamenta 0 v. solitaria, nunc elongata et fimbriata, sæpius brevia v. brevissima. Habitus *Hebanthis*. ROSEA, *Mart. Nov. Gen. et Sp.* ii. 58. Huc pertinent *Iresine elatior*, Rich.; Mart. l. c. t. 155; *I. Edmonstoni*, Hook. f.; *I. interrupta*, Benth. (*Alternanthera Richardii*, Moq. in DC. Prod. xiii. ii. 353, et IRENEIS, Moq. l. c. 349); *I. Hookeri*, Moq.; *I. latifolia* (*Alternanthera*, Moq.), aliæque.

CRUZETA, *Læfl. Iter*, 208 (CRUCITA, *Linn. Gen. n.* 167. CRUZITA, *Schreb. Gen.* 89) e Cumana est verisimiliter *Iresinis* species *I. celosioidi*, Linn. valde affinis nisi eadem, floribus (casu, v. falso descriptis) 4-meris, nec 5-meris. Cætera omnia conveniunt. Specimen nullum adest in herbario Linneano.

48. **Dicraurus,** *Hook. f. gen. nov.*—Flores dioici, minuti, bracteati et 2-bracteolati, lana longissima immersi. Perianthium teretiusculum, basi non induratum, 5-partitum; segmenta lineari-oblonga, obtusa, subscariosa, 1-nervia. Fl. ♂: Staminum filamenta 5, subulata, basi membrana connexa, 2 antherifera, cetera anantheria, laciniæ interpositæ 0; antheræ oblongæ, 1-loculares. Ovarii rudimentum ellipsoideum, compressum, apice 2-fidum. Fl. ♀: Staminodia 0. Ovarium ovoideum; stylus 0, stigmatibus 2 subulatis recurvis; ovulum 1, ab apice funiculi elongati suspensum. Utriculus late ovoideus, membranaceus, indehiscens. Semen inversum, subglobosum, testa tenuiter coriacea lævi; embryo periphericus, albumen farinaceum cingens, cotyledonibus late obovatis tenuibus concavis radicula supera multo latioribus.—Frutex ramosus, tenuiter cano-pubescens, ramis valde elongatis gracilibus teretibus. Folia parva, sparsa, alterna, breviter petiolata, ovata v. ovato-lanceolata, acuminata, integerrima, subtus sericea. Flores minuti, secus

ramos paniculæ terminalis ramulis alternis glomerati, ♀ longius lanati; bracteæ et bracteolæ late oblongæ v. rotundatæ, scariosæ, nitidæ.

Species 1, *D. leptocladus*, Hook. f., regionis Mexicano-Texanæ incola. *Wright*, n. 589, *Thurber*. *Iresine diffusa*, ex Torr. Bot. Emory Exped. 180, non H. B. et K. Genus ab omni tribu *Gomphrenearum* distinctum habitu, foliis alternis, et stigmatibus.

Ordo CXXXI. CHENOPODIACEÆ.

Endl. Gen. 292. Lindl. Veg. Kingd. 513. Salsolaceæ, Moq. in DC. Prod. xiii. ii. 41.

Flores hermaphroditi polygami v. unisexuales, regulares, rarius irregulares, nudi v. bracteati v. bracteati et 2-bracteolati. *Perianthium* simplex, sæpissime 3–5-lobum v. -partitum, v. in floribus fœmineis 0, post anthesin accrescens v. immutatum, rarissime baccatum v. nuceum; segmenta v. lobi membranacei herbacei v. chartacei, dorso nudi v. in tuberculos spinas v. alas excrescentes, æstivatione imbricati segmentis 2 v. 3 exterioribus, rarissime sub-valvati. *Stamina* numero partium perianthii isomera v. pauciora iisque opposita, nunquam plura, hypogyna v. disco v. perianthii segmentis affixa, raro staminodiis alternantia; filamenta subulata filiformia v. sæpius linearia et compressa, basi libera, rarissime membrana connata, perianthio longiora v. breviora. *Antheræ* dorsifixæ, didymæ oblongæ v. sagittatæ, 2-loculares, rarissime basifixæ, in subordine *Basellearum* versatiles et in alabastro reversæ, in ceteris incurvæ; loculi paralleli v. divergentes, a basi ad medium v. altius liberi, rimis anticis v. lateralibus dehiscentes; connectivum simplex v. in appendicem erectam planam cucullatam v. vesiculosam coloratam productum; pollen globosum. *Discus* 0 v. rarius annularis v. basin perianthii vestiens, raro crenatus v. in staminodia brevia productus. *Ovarium* liberum v. basi perianthii immersum, semper superum, et perianthio si adsit inclusum, ovoideum globosum depressum rarius oblongum v. lagenæforme, vertice sæpissime in stylum brevem v. elongatum angustatum, rarius truncatum, 1-loculare. *Stylus* terminalis, brevis v. elongatus, stigmate capitato 2–3-lobo, v. styli 2–3 elongati apice v. apice et introrsum papillosi, v. stigmata 2–5 sessilia undique v. introrsum tantum papillosa, basi connata v. discreta, interdum filiformia v. capillaria. *Ovulum* solitarium, amphitropum, erectum, funiculo basilari brevi, v. ab apice funiculi elongati suspensum. *Fructus*; utriculus membranaceus coriaceus v. carnosus, perianthio sæpissime inclusus, et non raro cum eo deciduus, indehiscens, rarissime circumscissus, pericarpio libero v. testæ seminis adhærens. *Semen* erectum inversum v. horizontale, lenticulare subglobosum reniforme v. ovoideo-compressum; testa crustacea coriacea carnosula v. membranacea, interdum albumini adhærens, lævis v. granulata, endopleura 0 v. membranacea; albumen farinaceum carnosum v. 0. *Embryo* periphericus, annularis v. hippocrepicus, albumen cingens; in *Salicornieis* dorsalis, virgulæformis v. conduplicatus et exalbuminosus; in *Salsoleis* aliisque exalbuminosus, plano- v. subcochleato-spiralis, radicula extraria; cotyledones sæpissime angustæ, plano-convexæ, in paucis planæ, radicula elongata paullo latiores; plumula inconspicua.

Herbæ annuæ v. perennes, v. frutices, raro arbusculæ humiles, glabræ glaucæ farinosæ v. lepidotæ, pilosæ v. villosæ, non raro carnosulæ. Caules continui v. articulati, teretes v. angulati, erecti v. decumbentes, in *Baselleis* dextrorsum volubiles. Folia alterna v. rarius opposita, plana et dilatata v. carnosa et cylindracea v. semiteretia, sæpissime integerrima, in paucis irregulariter sinuato-dentata, nunquam regulariter serrata; in *Salicornieis* et paucis aliis cauli adnata limbo brevissimo v. evanido; stipulæ 0. Inflorescentia varia, sæpe glomerata glomerulis in spicas paniculasve foliosas dispositis, v. axillares et solitarii, in *Chenopodiis* paucis dichotome cymosi; in *Salicornieis* strobilacei v. cavis rhacheos articulatæ immersi; rarissime pedicellati et spicati v. racemosi, inconspicui,

sæpe parvi v. minuti, fere semper virides. Perianthia post lapsum fructus persistentia, rarius cum eo decidua, in paucis in globum capitatum concreta.

Species ad 520, per orbem terrarum late dispersæ, aliæ littora maris et lacuum salsorum habitantes, aliæ præsertim in desertis ruderatis, et hominum domiciliorum vicinibus inveniuntur; pleræque temperatæ, paucæ regionum frigidarum et tropicarum incolæ.

Chenopodiaceæ, limitibus supra datis circumscriptæ, ordinem formant sat naturalem et pro maxima parte bene definitum, etsi pluribus e *Curvembryis* apetalis arcte affinem. A *Phytolaccaceis* facile distinguuntur floribus rarissime racemosis nisi in *Baselleis*, v. spicatis ut in *Lophiocarpo*, genus haud male *Phytolaccaceum* nuncupandum carpello unico et semine horizontali anomalum. Ab *Illecebraceis* differunt stipularum defectu et staminodiis rarissimis. Affinitas summa cum *Amarantacearum* generibus quorum antheræ 2-loculares et ovarium 1-ovulatum, nec characteribus validioribus separantur quam perianthii bractearumque natura et utriculo indehiscente; arcte etiam cum illis connectuntur mediantibus *Acroglochine* et *Hablitzia* quorum habitus *Chenopodiacearum* et utriculus circumscissus; et tribus *Polycnemearum* fere æquo jure ad *Chenopodiaceas* vel ad *Amarantaceas* referenda, sed hic prioribus associata ob affinitatem cum *Camphorosmate*.

FORMÆ ABNORMES.

Caulis volubilis in *Baselleis*, scandens in *Hablitzia*, articulatus in generibus variis e tribu *Salicornearum* et in paucis aliis.

Inflorescentia dichotome cymosa in *Acroglochine* et in sectione *Botrydio Chenopodii*, racemosa in *Basselleis*, spicata in *Lophiocarpo* et paucis aliis.

Antheræ basifixæ in *Ulluco*; connectivum appendice magna auctum in *Halocharide*, *Halanthio* et affinibus.

Utriculus circumscissus in *Acroglochine* et *Hablitzia*; fructus baccatus in *Rhagodia* et in sectione *Blito Chenopodii*, subdrupaceus in *Lophiocarpo*, fenestratim dehiscens in *Agriophyllo*.

Semina in speciebus nonnullis *Suædæ* et *Borsczoviæ* dimorpha, præcocia minora testa crustacea, serotina majora testa membranacea.

Embryo conduplicatus, radicula incumbente in *Salicornia*.

CONSPECTUS GENERUM.

SUBORDO I. CHENOPODIEÆ. Bracteolæ perianthio non adnatæ. Antheræ alabastro erectæ v. incurvæ. Caulis nunquam volubilis.

Series I. Cyclolobeæ. Embryo annularis v. hippocrepicus, albumen copiosum cingens, rarius virgulæformis hemicyclicus v. conduplicatus.

Exceptum : Semen in *Salicornia* exalbuminosum.

Tribus I. Euchenopodieæ. Flores glomerati, hermaphroditi v. unisexuales, perianthiis homomorphis. Semen erectum inversum v. horizontale. Embryo annularis v. hippocrepicus, albumen copiosum cingens. Caulis inarticulatus. Folia plana, sæpissime glabra v. farinosa.

Exceptum : Flores in *Lophiocarpo* spicati.

* *Utriculus membranaceus, circumscissus, perianthio patente stipatus. Semen horizontale.*

1. ACROGLOCHIN. Flores ebracteolati. Stamina 1–3. Stigmata 2. Herba erecta, annua.—*Himalaya, China.*

2. HABLITZIA. Flores 2-bracteolati. Stamina 5. Stigmata 3. Herba alte scandens, radice perenni.—*Caucasus.*

** *Fructus drupaceus v. baccatus, perianthio patente v. erecto stipatus. Semen erectum v. horizontale.*

3. RHAGODIA. Flores glomerati. Semen horizontale. Herbæ v. frutices.—*Australia.*

4. LOPHIOCARPUS. Flores spicati. Semen erectum. Herbæ.—*Afric. austr.*

*** *Utriculus membranaceus, indehiscens, perianthio sæpissime inclusus.*

5. APHANISMA. Perianthium minutissimum, 3-partitum. Stamen 1. Semen horizontale, testa crustacea.—*California.*

6. CYCLOLOMA. Perianthii tubus ala circumdatus. Stamina 5. Semen horizontale, testa crustacea.—*Amer. bor.*

7. Monolepis. Perianthii segmenta v. bracteolæ 1–3, minutissimæ. Stamen 1. Semen erectum, testa crustacea.—*Siberia, Amer. bor. occ.*

8. Chenopodium. Perianthium 5-partitum, fructiferum sæpissime immutatum. Stamina 1–5. Semen erectum v. horizontale, testa crustacea v. coriacea.—*Orb. tot.*

9. Roubieva. Perianthium breviter 5-lobum, fructiferum clausum, capsulæforme, reticulatum. Semen erectum, testa crustacea.—*Amer. temp. et trop, in orb. vet. subspontanea.*

10. Beta. Perianthium 5-lobum, fructiferum basi induratum, lobis erectis v. inflexis. Semen horizontale, testa coriacea.—*Europ., Oriens, Afric. bor.*

11. Orbbolitum. Perianthium 5-partitum, fructiferum basi induratum, segmentis patentibus. Semen horizontale, testa coriacea.—*Algeria.*

Tribus II. Atripliceæ. Flores unisexuales, heteromorphi; ♂ ebracteolati, 3–5-lobi v. -partiti; ♀ sæpissime bracteolis 2 accrescentibus fructiferis liberis v. in thecam connatis instructi, perianthio 0. Semen erectum v. horizontale, testa coriacea v. crustacea; embryo annularis, albumen copiosum cingens. Caulis inarticulatus. Folia sæpius plana, non raro lepidota.

* *Flores ♀ ebracteolati v. bracteolis planis, fructiferis basi v. ad medium connatis, in thecam apertam planam v. turgidam connatis.*

12. Spinacia. Fl. ♀ ebracteolati, perianthio 3–4-dentato, tubo fructifero indurato clauso.—*Oriens, ubique cult.*

13. Exomis. Fl. ♀ : bracteolæ parvæ, fructiferæ immutatæ, perianthio 0.—*Afric. aust.*

14. Atriplex. Fl. ♀ : bracteolæ amplæ, fructiferæ auctæ, perianthio 0.—*Reg. temp. et subtrop.*

(Vide quoque 20, Microgynœcium.)

** *Flores ♀ 2-bracteolati, bracteolis conduplicatis, in thecam clausam obcompressam connatis.*

15. Grayia. Fl. ♀ : theca orbicularis, alata, glabra. Semen erectum, radicula infera.—*Amer. bor. occ.*

16. Suckleya. Fl. ♀ : theca complanata, marginibus cristatis. Semen inversum, radicula supera.—*Mont. Scopul.*

17. Eurotia. Fl. ♀ : theca immarginata, sericeo-fulva. Semen erectum, radicula infera.—*As. occ. et med., Amer. bor. occ.*

18. Ceratocarpus. Fl. ♀ : theca compressissima v. spinosa. Semen erectum, radicula infera.—*As. occid.*

Tribus III. Camphorosmeæ. Flores spicati v. glomerati, v. ♀ solitarii, hermaphroditi v. unisexuales, perianthiis homomorphis v. in flore fœmineo 0. Utriculus perianthio immutato inclusus v. nudus. Semen erectum, testa membranacea albumini arcte adhærente; embryo (sæpe elongatus) hippocrepicus, albumen copiosum cingens. Caulis inarticulatus. Folia ovato-linearia v. lanceolata, sæpius sericea.

19. Axyris. Flores monoici. Perianthium 3–5-partitum. Utriculus semini adhærens, superne cristatus.—*As. bor., Amer. bor. occ.*

20. Microgynœcium. Flores monoici. Perianthium masc. 3–5-lobum, fœm. 0. Utriculus superne cristatus.—*Tibetia.*

21. Camphorosma. Perianthium compressum, 4–5-dentatum, fructiferum fere clausum dentibus inappendiculatis 2 lateralibus majoribus.—*Reg. Mediterr., As. bor. et med.*

22. Panderia. Perianthium æqualiter 5-lobum, lobis dorso tuberculatis v. appendiculatis.—*As. occid. et med.*

23. Kirilovia. Perianthium æqualiter 4–5-dentatum, dentibus dorso nudis.—*As. med.*

Tribus IV. Corispermeæ. Flores spicati, hermaphroditi. Fructus e perianthio longe exsertus. Semen erectum, valde compressum, testa membranacea albumini arcte adhærente embryo annularis albumen copiosum cingens. Caulis inarticulatus. Folia alterna, angusta.

24. Corispermum. Bracteæ magnæ, imbricatæ, fructum inermem indehiscentem velantes.—*Europ. aust., Asia temp., Amer. bor. occ.*

25. Anthochlamys. Bracteæ fructu inermi indehiscente breviores.—*As. occid.*

26. Agriophyllum. Bracteæ spinescentes. Fructus 2-spinosus, [illegible].—*As. occid. et med.*

Tribus V. Polycnemeæ. Flores solitarii, axillares, hermaphroditi, 2-bracteolati. Utriculus perianthio immutato inclusus. Semen inversum, testa crustacea; embryo annularis, albumen copiosum cingens. Caulis inarticulatus. Folia linearia v. subulata.

27. Polycnemum. Herbæ rigidulæ, foliis alternis subulatis.—*Reg. Mediterr.*, *As. occid.*

28. Hemichroa. Herbæ v. suffrutices, foliis alternis linearibus carnosulis.—*Australia.*

29. Nitrophila. Herbæ foliis oppositis linearibus carnosulis.—*Amer. bor. occ.*

Tribus VI. Chenoleeæ. Flores solitarii v. glomerati, sæpius hermaphroditi et fœminei, perianthiis homomorphis. Utriculus perianthio sæpissime accrescente v. appendiculato inclusus. Semen horizontale, rarissime erectum v. inversum, testa membranacea v. coriacea albumini parco v. copioso sæpe adhærente; embryo annularis, albumen cingens. Caulis inarticulatus. Folia angusta.

* *Perianthium fructiferum nudum spinosum v. alatum, basi non induratum.*

30. Chenolea. Perianthium globosum v. turbinatum, fructiferi lobis inappendiculatis v. dorso spinosis.—*Reg. temp. et subtrop. orb. vet.*

31. Kochia. Perianthium turbinatum, fructiferi lobis dorso horizontaliter late alatis.—*Reg. temp. et subtrop.*

32. Didymanthus. *Flores 2-ni basibus connati.* Perianthii fructiferi lobi dorso horizontaliter alati. *Folia opposita.—Australia.*

33. Enchylæna. Perianthium orbiculare, depressum, fructiferum carnosum.—*Australia.*

** *Perianthium fructiferum inordinate auctum, lignosum, crustaceum v. suberosum.*

34. Babbagia. Flores minimi. Perianthium fructiferum alis 3 verticalibus. Folia alterna. —*Australia.*

35. Sclerolæna. Perianthia fructifera divaricato-2-spinosa v. in capitulum globosum concreta.—*Australia.*

36. Anisacantha. Perianthium fructiferum crustaceum, spinis 2–5-patentibus. *Semen inversum.—Australia.*

37. Threlkeldia. Perianthium fructiferum inappendiculatum inerme v. spinis 5 erectis. Semen horizontale v. obliquum.—*Australia.*

38. Cypselocarpus. Perianthium fructiferum cylindraceum, nuceum, inerme, 2-locellatum. Stigma depressum. Semen erectum.—*Austral. occid.*

Tribus VII. Salicornieæ. Flores axillis squamarum strobili v. cavis rhacheos immersi, hermaphroditi. Utriculus perianthio sæpe modice aucto inappendiculato inclusus. Semen erectum inversum v. horizontale, testa crustacea v. carnosula; embryo dorsalis, virgulæformis, albumine parco v. copioso farinoso v. carnoso, vel embryo conduplicatus albumine 0. Herbæ v. fructices carnosi, ramis continuis v. articulatis. Folia opposita cauli adnata planta quasi aphylla, v. opposita et alterna plus minusve elongata.

* *Flores in cavis rhacheos inarticulati immersi, connati. Semina albuminosa.*

39. Kalidium. Perianthium naviculare, 4-dentatum. Radicula infera.—*Ross. austr.*, *As. occid. et med.*

** *Flores in axillis squamarum strobili reconditi. Semina albuminosa.*

40. Halostachys. Perianthium pyramidatum, ore minute 3-lobo. Radicula supera. Strobili oppositi, squamis deciduis.—*Reg. Casp.*

41. Spirostachys. Perianthium pyramidatum, ore minute 4–5-lobo. Radicula infera. Strobili alterni, squamis persistentibus.—*Amer. bor. et austr.*

42. Heterostachys. Perianthium orbiculare, compressum, late alatum. Radicula infera. Strobili suboppositi, squamis caducis.—*Reg. Argent.*

43. Halopeplis. Perianthium 4-gonum, squamæ adnatum. Radicula infera. Strobili alterni, squamis persistentibus.—*Eur. aust.*, *Afric. bor.*, *As. occid.*

44. Halocnemon. Perianthium obpyramidatum, 3-partitum. Radicula supera. Strobili oppositi et alterni, squamis deciduis.—*Eur. austr.*, *As. occid. et med.*

45. Tecticornia. Perianthium tubulosum, ore lacero. Radicula infera. Strobili terminales, 1–3-ni, squamis persistentibus.—*Australia.*

*** *Flores in cavis articulorum superpositorum immersi.*

46. Pachycornia. Perianthium compressum, ore 4-dentato. Semen albuminosum, rhachi lignosæ crassæ pauci-articulatæ immersum.—*Australia.*

47. Arthrocnemum. Perianthium ovoideum v. pyramidatum, ore angustato 3–4-fido. Semen albuminosum.—*Littora salsa.*

48. Salicornia. Perianthium obpyramidatum, vertice truncato, ore 3–4-denticulato. *Semen exalbuminosum, embryone conduplicato.*—*Littora salsa.*

49. Microcnemum. Perianthium 0. Semen albuminosum.—*Hispania.*

Series II. Spirolobeæ. Embryo plano- v. cochleato-spiralis; albumine parco v. 0.

Tribus VIII. Suædeæ. Flores hermaphroditi v. unisexuales, bracteati et 2-bracteolati. Utriculus perianthio immutato v. appendiculato inclusus. Semen erectum inversum v. horizontale, testa crustacea v. in fructibus serotinis membranacea; embryo spiralis. Caulis inarticulatus. Folia varia.

* *Utriculus liber v. basi perianthio adnatus.*

50. Suæda. Perianthium 5-lobum. Folia linearia, carnosa.—*Littora salsa.*

51. Alexandra. Perianthium 5-partitum. Folia ovata, semiamplexicaulia.—*Soongaria.*

** *Utriculus perianthio adhærens.*

52. Borsczovia. Perianthium a latere compressum. Semen erectum.—*Desert. Aral.*

53. Bienertia. Perianthium disciforme. Semen horizontale.—*Persia.*

Tribus IX. Salsoleæ. Flores hermaphroditi v. unisexuales, bracteati et 2-bracteolati. Utriculus perianthio appendiculato sæpissime horizontaliter alato inclusus. Semen erectum inversum v. horizontale, testa membranacea v. carnosula; embryo spiralis. Caulis continuus v. articulatus. Folia angusta v. 0.

* *Semen sæpissime horizontale, radicula centrifuga.*

54. Traganum. Perianthii segmenta in tubum demum induratum connata. Staminodia 0. Folia alterna.—*Afric. bor., ins. Canar. orient.*

55. Cornulaca. Perianthii segmenta in urceolum demum induratum connata. Staminodia 5. Folia alterna.—*Afric. bor., Arabia, Assyria.*

56. Seidlitzia. Perianthium fl. ♂ 5-partitum, fl. ♀ 5-lobum, lobis dorso alatis. Staminodia 0. Folia opposita.—*Orient.*

57. Arthrophyllum. Perianthii segmenta orbicularia. Discus crassus. Staminodia 0. Folia opposita, subulata.—*As. med.*

58. Horaninovia. Perianthii segmenta dorso gibba, suberosa. Discus cupularis. Staminodia 5. Folia opposita et alterna, subulata.—*Soongaria, Desert.*

59. Haloxylon. Perianthii segmenta dorso horizontaliter late alata. Discus conspicuus. Staminodia 5. *Rami articulati*, foliis 0 v. oppositis. *Hispania, Afric. bor., As. occid., India.*

60. Salsola. Perianthii segmenta dorso horizontaliter alata. Discus obscurus v. 0. Staminodia 0. Rami continui. Folia raro opposita.—*Reg. temp. et subtrop.*

61. Helicilla. Perianthium 5-fidum, demum baccatum, substellate 5-gonum.—*China.*

** *Semen erectum v. inversum rarius horizontale.*

† *Perianthii segmenta 3 exteriora. Semen, Ofaiston exceptum, a dorso compressum.*

62. Ofaiston. Perianthii segmenta 3 exteriora alata. Stamina 1–2; staminodia 0. Folia superiora alterna. Flores sulcis ramulorum insidentes.—*Reg. Ural.*

63. Noæa. Perianthii segmenta omnia alata. Stamina 5, disco carnoso inserta; antheræ appendiculatæ; staminodia 0.—*Orient.*

64. Girgensohnia. Perianthii segmenta 2 v. plura, alata. Stamina 5, disco inserta; antheræ inappendiculatæ; staminodia 5. Caulis vix articulatus.—*As. occid.*

65. Anabasis. Perianthii segmenta 2 v. plura, alata. Stamina 5; antheræ vix aut non appendiculatæ; staminodia 5. Caulis articulatus.—*Afric. bor., orient.*

†† *Perianthii segmenta 2 exteriora (anticum et posticum). Semen a dorso compressum. Antheræ apice vesicula v. membrana appendiculatæ. Staminodia 0 v. minuta.*

66. NANOPHYTUM. Perianthii segmenta 5, convoluta, scariosa, demum longe excrescentia, inappendiculata. Stamina 5; antheræ appendice conica. Folia sparsa, acerosa.—*Reg. Casp.*

67. PETROSIMONIA. Perianthii segmenta 2 v. plura. Stamina 5 v. pauciora; antheræ sæpe apice cohærentes; staminodia 0.—*Orient., As. med.*

††† *Perianthii segmenta 2 exteriora (anticum et posticum). Semen a latere compressum.*

a. Antheræ appendiculatæ.

68. HALOCHARIS. Perianthii segmenta 5, fructifera immutata. Stamina 5. Radicula ascendente. Folia sparsa.—*As. med.*

69. HALIMOCNEMIS. Perianthium fructiferum accrescens, basi nuceum; segmenta 3–5, basi connata, inappendiculata. Folia sparsa.—*Reg. Casp.*

70. HALANTHIUM. Perianthii segmenta 5, fructifera basi libera, immutata v. 2 exteriora dorso alata.—*As. occid.*

71. HALARCHON. Perianthii segmenta 5, hyalina, basi libera. *Stigma 2-lobum, indusiatum.—Afghanistan.*

72. PIPTOPTERA. Perianthii segmenta 5, demum indurata, 2 exteriora alis deciduis instructa. —*Turkestan.*

b. Antheræ inappendiculatæ.

73. HALOGETON. Perianthii segmenta dorso demum gibba v. alata. Herbæ annuæ.—*Hispania, Afric. bor., As. occid. et med.*

74. SYMPEGMA. Perianthii segmenta demum alata. *Flores in capitula terminalia glomerati.* —*As. med.*

Tribus X. Sarcobatideæ. Flores unisexuales, ebracteolati; ♂ amentacei achlamydei; ♀ axillares, perianthio demum horizontaliter alato ovario conferruminato. Utriculus membranaceus. Semen erectum, radicula infera.

75. SARCOBATUS. Frutex foliis linearibus.—*Amer. bor. occ.*

SUBORDO II. BASELLEÆ. Caulis volubilis (dextrorsum). Flores 4-bracteolati; bracteolæ 2 infraflorales parvæ v. minutæ ad apicem pedicelli; florales 2 infrafloralibus alternæ, amplæ, perianthio basi v. altius adnatæ. Antheræ sæpissime versatiles, alabastro posticæ. Ovulum erectum, funiculo brevi. Semen erectum.

Tribus XI. Eubaselleæ. Filamenta in alabastro recta. Embryo (in genere unico notus) spiralis, albumine 0 v. parco.

76. BASELLA. Flores sessiles, carnosi. Perianthii segmenta erecta, obtusa. Stigmata 3.—*Reg. trop.*

77. TOURNONIA. Flores pedicellati, carnosuli. Perianthii segmenta patentia, obtusa. Stigmata 3.—*Nov. Grenada.*

78. ULLUCUS. Flores pedicellati, membranacei. Perianthii segmenta patentia, caudato-acuminata. Stylus brevis, stigmate obtuso.—*Andes.*

Tribus XII. Boussingaultieæ. Filamenta in alabastro subapice v. demissius recurva. Embryo semi-annularis, albumine farinaceo.

79. BOUSSINGAULTIA. Bracteolæ florales oblongæ, obtusæ, perianthio breviores.—*Amer. trop.*

80. ANREDERA. Bracteolæ florales naviculares, dorso longitrorsum late longeque alatæ. Styli 3.—*Amer. Calid.*

GENERA EXCLUSA.

ACNIDA, Mitch. et BOSEA, Linn. ad **Amarantaceas** pertinent, supra, 26, 29.

CRYPTOCARPUS, H. B. et K. ad **Nyctagineas** refertur, supra, 11.

DYSPHANIA, R. Br. inter **Illecebraceas** recenseter, supra, 14.

PUGIONIUM, Gærtn., est **Caryophyllea**, supra, i. 96.

THELYGONUM, Linn., infra sub **Urticaceis** quærendum.

TRIBUS I. CHENOPODIEÆ.

1. **Acroglochin,** *Schrad. Cat. Hort. Gœtt.* **1824,** *ex Nees.* (Blitanthus, *Reichb. Cat. Hort. Dresd.* 1824, *ex Nees.* Lecanocarpus, *Nees. Pl. Hort. Bonn.* 4, *t.* 2.)—Flores minuti, hermaphroditi, ebracteati, ebracteolati. Perianthium herbaceum, 5-partitum, basi non induratum; segmenta subæqualia v. inæqualia, ovato-oblonga, subacuta, fructu

patentia. Stamina 1–3, filamentis basi dilatatis; antheræ majusculæ, didymæ, 2-loculares. Ovarium rhombeo-globosum, in stylum brevem attenuatum, stigmatibus 2 brevibus subulatis suberectis; ovulum erectum, funiculo brevi. Utriculus perianthio patente inclusus, pateriformis, vertice depressus, ambitu marginatus, circumscissus, margine valvæ superioris indurato. Semen horizontale, lenticulare v. subreniforme, testa atra crustacea nitida; embryo fere annularis, albumen farinaceum cingens, cotyledonibus linearibus planis acutis, radicula infera.—Herba annua, erecta, glabriuscula, caule simplici. Folia alterna, longe petiolata, ovata, irregulariter dentata. Flores in ramos cymarum axillarium glomerati, sessiles, minimi, ramulis sterilibus acerosis suffulti, virides.

Species 1, montium Indiæ borealis et Chinæ occidentalis incola. *Moq. in DC. Prod.* xiii. ii. 253.

Genus anomalum, habitu, foliis dentatis, defectu bractearum, inflorescentia dichotoma, ramulis sterilibus acerosis cymarum, staminibus et semine horizontali *Chenopodieis* e sectione *Botryde* affine. Utriculus circumscissus *Amarantacearum*, a quibus differt foliis dentatis, habitu, inflorescentia et floribus ebracteolatis.

2. **Hablitzia,** *Bieb. in Mem. Soc. Nat. Mosc.* v. 24; *Cent. Pl. Ross. t.* 54; *Fl. Taur. Cauc.* iii. 170.—Flores hermaphroditi, minute bracteati et 2-bracteolati. Perianthium herbaceum; segmenta 5, oblonga, obtusa, 5-nervia, fructifera stellatim patentia. Stamina 5, filamentis basi in annulum connatis; antheræ oblongæ, 2-loculares. Ovarium late ovoideum, in stylum brevem crassum attenuatum, stigmatibus 3 brevibus demum elongatis recurvis; ovulum sessile, erectum. Utriculus perianthio stellatim patente stipatus, depresso-pateriformis, circumscissus, margine valvæ superioris incrassato. Semen horizontale, reniformi-rotundatum, compressum, testa crustacea nigra nitida; embryo annularis, albumen farinaceum cingens, radicula centrifuga.—Herba alte scandens, glabra v. parce pilosa, caulibus sulcatis. Folia alterna, longe petiolata, triangulari-cordata, sinu profundo, acuminata, integerrima, membranacea, nervosa. Flores parvi, virides, in ramos cymarum sessiles v. terminali pedicellato; cymæ in paniculas thyrsoideas pendulas dispositæ. Stamina interdum imperfecta v. deficientia.

Species 1, Caucasica. *Moq. in DC. Prod.* xiii. ii. 254. *Reichb. Iconogr. Bot. t.* 754. *Eichw. Pl. Casp. Cauc.* t. 23.

Genus valde anomalum, an inter *Amarantaceas* (a quibus habitu differt, sed utriculo convenit) melius collocandum? Semina matura a nobis non visa.

3. **Rhagodia,** *R. Br. Prod.* i. 408.—Flores hermaphroditi v. monoici, rarius dioici, ebracteati et ebracteolati. Perianthium 5-lobum v. 5-partitum; segmenta oblonga v. rotundata, herbacea v. coriacea, obtusa, incurva, fructifera immutata v. parum aucta, stellatim patentia v. basin rarius verticem fructus includentia. Stamina 5 v. pauciora, basi perianthii inserta, filamentis subulatis compressis; antheræ ovoideæ, basi 2-fidæ, inclusæ v. exsertæ. Discus 0. Ovarium subglobosum; stigmata 2 rarissime 3, subulata v. linearia, intus papillosa. Bacca globosa v. depresso-globosa, pericarpio semini non adhærente. Semen horizontale, depresso-lenticulare, testa crustacea; embryo annularis, albumen copiosum farinaceum cingens, cotyledonibus angustis, radicula centrifuga.—Frutices, rarius herbæ, graciles v. robusti, farinosi v. tomentelli. Folia alterna et subopposita, sessilia v. petiolata, linearia ovata oblonga v. cordata, integerrima v. sinuato-lobata. Flores virides, parvi v. minuti, in glomerulos axillares et secus ramulos spicæ v. paniculæ terminalis dispositi, sessiles v. breviter pedicellati. Bacca perianthio patente v. incurvo basi stipata, rarissime inclusa.

Species 13, omnes Australienses. *Benth. Fl. Austral.* v. 151. *Labill. Pl. Nov. Holl.* i. *t.* 96 (*Chenopodium*).

4. **Lophiocarpus,** *Turcz. in Bull. Soc. Imp. Nat. Mosc.* 1843, 55. (Wallinia, *Moq. in DC. Prod.* xiii. ii. 143.)—Flores spicati, hermaphroditi, bracteati et 2-bracteolati. Perianthium 5-partitum; segmenta herbacea, oblonga, obtusa, concava, incurva, inappendiculata, fructifera persistentia et immutata. Stamina 5, perigyna, filamentis linearibus compressis; antheræ subexsertæ, oblongæ. Discus inconspicuus. Ovarium

ovoideum, substipitatum, stigmata 3–4, crassiuscule filiformia, recurva, undique papillosa; ovulum subsessile. Fructus perianthio basi stipatus, ellipsoideus v. obovoideo-globosus, in stipitem brevissimum contractus, 8-costatus, epicarpio carnoso, endocarpio crustaceo semini arcte adhærente. Semen erectum, globosum, paulo compressum, testa atra crustacea a tegumento interiore tenuiter coriaceo secedente; embryo gracilis, albidus, annularis, albumen copiosum cingens, radicula elongata infera.—Fruticuli basi ramosi, glaberrimi, erecti, ramis gracilibus ascendentibus. Folia parva, alterna, sessilia, linearia, integerrima, carnosula. Flores virides, in spicas graciles elongatas aphyllas terminales dispositi, solitarii v. 2–3-ni; bracteæ et bracteolæ rhachi persistentes, parvæ, membranaceæ. Fructus parvus, perianthium superans, viridis.

Species 2, Capenses, altera *L. polystachyus*, Turcz. l. c., fructu ellipsoideo, altera *L. Burchellii*, Hook. f., gracilior et ramosior, foliis multo angustioribus, spicis brevioribus et gracilioribus, floribus minoribus et fructu fere globoso.

5. **Aphanisma**, *Nutt.*; *Moq. in DC. Prod.* xiii. ii. 54.—Flores hermaphroditi, minimi, axillares, ebracteolati. Perianthii segmenta 3, subæqualia, obovato-oblonga, obtusa, inappendiculata, fructifera immutata. Stamen 1, hypogynum, filamento filiformi; anthera globoso-ellipsoidea. Discus 0. Ovarium depresso-globosum, in stylum brevem attenuatum, stigmatibus 3 subulatis recurvis; ovulum subsessile. Utriculus perianthio non inclusus, globosus, tenuiter 5-costatus, pericarpio tenuiter crustaceo semini non adhærente. Semen horizontale, lenticulare, testa crustacea tenuissima rugulosa nitida; embryo crassiusculus, annularis, albumen copiosum cingens, radicula centrifuga.—Herba annua, prostrata, gracilis, glaberrima, carnosula, ramis ascendentibus. Folia alterna, breviter petiolata, inferiora obovato-lanceolata v. linearia, obtusa, superiora sensim minora sessilia ovata acuta. Flores solitarii, virides. Utriculus perianthio minutissimo basi stipatus.

Species 1, Californica. *S. Wats. Bot. Calif.* ii. 45, *ined.* Nec fructum maturum nec stamen vidimus.

6. **Cycloloma**, *Moq. Chenop. Enum.* 17, *et in DC. Prod.* xiii. ii. 60. (Cyclolepis, *Moq. in Ann. Sc. Nat. ser.* 2, i. 203, *t.* 9. Amoreuxia, *Moq. in Mém. Soc. Hist. Nat. Monsp.* 1826, *ex eod. l. c.* Amorea, *Moq. in Delile, Cat. Hort. Monsp.* 1844.)—Flores polygamo-monoici v. dioici, bracteati, ebracteolati. Perianthii tubus late obconicus, in alam pateriformem horizontalem expansus; lobi 5, triangulari-ovati, obtusi, inflexi, dorso carinati. Stamina 5, hypogyna, filamentis subulatis; antheræ late oblongæ. Ovarium depresso-globosum, lanatum; stigmata 3, brevia, libera v. basi connata; ovulum subsessile. Utriculus parvus, perianthio disciformi ala excrescente circumdato inclusus, pericarpio membranaceo semini non adhærente. Semen horizontale, plano-orbiculare, marginibus rotundatis, testa fusca lævi nitida; embryo annularis, albumen farinaceum cingens, radicula centrifuga.—Herba erecta, ramosa, glabra v. laxe pubescens, ramulis fructiferis elongatis gracilibus. Folia alterna, petiolata, oblonga, sinuato-dentata, dentibus apice acicularibus. Flores minuti, sessiles, virides, in glomerulos secus ramulos floriferos elongatos sparsos dispositi, interdum abortu unisexuales.

Species 1, regionum interiorum Americæ borealis incola. *Desf. in Ann. Mus. Par.* ii. *t.* 34 (*Salsola*). *Willd. Hort. Berol. t.* 28 (*Kochia*).

7. **Monolepis**, *Schrad. Ind. Sem. Hort. Gœtt.* 1830; *Linnæa* vi. *Litt. Ber.* 73.—Flores minuti, polygami, ebracteati et ebracteolati. Perianthii segmenta 1–3, inæqualia, (rarius 0), ovata v. rotundata, persistentia, fructifera immutata. Stamen 1, filamento complanato; anthera didyma. Discus 0. Ovarium ovoideum, compressum; stigmata 2, subulata, basi connata, intus papillosa; ovulum subsessile. Utriculus perianthio non inclusus, ovoideus, compressus, pericarpio membranaceo v. celluloso semini laxe adhærente. Semen erectum, globosum, compressum, marginibus acutis v. obtusis, testa crustacea granulata; embryo annularis, albumen testæ adhærens densum cingens,

radicula infera.—Herbæ annuæ, glabræ v. subfarinosæ, ramosæ, ramis herbaceis et crassiusculis v. rigidis et filiformibus. Folia alterna, petiolata v. sessilia, ovata oblonga hastata v. spathulata, integra lobata v. subpinnatifida. Flores in glomerulos axillares dispositi, v. in ramulos dichotomos divaricatos capillares subsolitarii. An perianthia pro bracteis sumenda ?

Species 2, Asiæ boreali-orientalis et Americæ boreali-occidentalis incola. *C. A. Mey. in Bull. Phys. Math. Acad. Sc. Petersb.* ii. (1843) 131. *Moq. in DC. Prod.* xiii. ii. 85. *S. Wats. Bot. Calif.* ii. 49, *ined. M. pusilla*, Torr., habitu rigido dichotome ramosissimo, ramis ramulisque filiformibus, ultimis fere capillaribus, floribus subsolitariis remotis et perianthio 2–3-partito, a specie typica conspicue differt. *M. asiatica*, Fisch. et Mey. in C. A. Mey. l. c., Moq. l. c. 86, a specie Americana, *M. chenopodioide*, non distinguenda.

8. Chenopodium, *Linn. Gen. n.* 309.—Flores hermaphroditi, rarissime unisexuales, ebracteati et ebracteolati. Perianthum 5- rarissime 1–3–4-partitum v. -lobum; lobi v. segmenta concava, incurva, dorso medio subincrassata v. carinata, inappendiculata, fructifera immutata v. rarius excrescentia succosa v. insigniter aucta. Stamina 5 v. pauciora, hypogyna v. subperigyna, filamentis interdum basi connatis; antheræ didymæ v. oblongæ. Discus 0 v. annularis. Ovarium depresso-globosum, rarius ovoideum; stylus 0, rarius elongatus; stigmata 2–5, libera v. basi rarissime in stylum elongatum connata, subulata v. filiformia; ovulum subsessile. Utriculus ovoideus et erectus v. globosus et depressus, perianthio sæpius immutato marcescente v. herbaceo inclusus v. exsertus, pericarpio membranaceo v. carnosulo. Semen horizontale, rarius erectum, testa crustacea v. coriacea; embryo annularis v. fere annularis, albumen farinaceum copiosum cingens, radicula infera v. centrifuga.—Herbæ, rarius basi lignosæ, annuæ v. perennes, farinosæ v. glanduloso-pubescentes, rarius glabræ, interdum graveolentes v. aromaticæ. Folia alterna, sessilia v. petiolata, linearia oblonga ovata deltoidea v. hastata, integerrima sinuato-dentata v. -lobata v. fere pinnatifida. Flores minuti, glomerati, glomerulis axillaribus et in spicas simplices v. ramosas terminales dispositi.

Species ad 50, in regionibus temperatis totius orbis obviæ, inter tropicos rariores. *Moq. in DC. Prod.* xiii. ii. 61 (*Chenopodium*) et 81 (*Blitum*). *Walp. Ann.* i. 566, iii. 302. *Fenzl in Ledeb. Fl. Ross.* iii. 693 *et in Mart. Fl. Bras.* v. i. 141. *Benth. Fl. Austral.* v. 157.

Species sub sectionibus sequentibus bene ordinantur:—

1. *Chenopodiastrum*, Moq. Perianthium fructiferum herbaceum v. marcescens, utriculum totum v. fere totum includens. Stigmata 2, brevia. Semen erectum, embryone perfecte annulari. *Nees, Gen. Fl. Germ. Monochl. n.* 56, *f.* 1 *ad* 13. *Fl. Dan. t.* 1148, 1150, 1152, 1153, 2048, 2049. *Jacq. Hort. Vind.* iii. t. 80. *Ledeb. Ic. Fl. Ross. t.* 168. *Griff. Ic. Pl. Asiat. t.* 521. *Fenzl in Mart. Fl. Bras.* v. i. *t.* 45.

OLIGANDRA, *Less. in Linnæa* ix. 199 (LIPANDRA, *Moq. Chenop. Enum.* 19; GANDRILOA, *Steud. Nomencl. ed.* 2; OLIGANTHERA, *Endl. Gen. Suppl.* i. 1377) genus conditum fuit ad specimen mancum *Chenopodii polyspermi*, fide C. A. Mey. in Bull. Phys. Math. Acad. Sc. Petersb. ii. 132.

2. *Ambrina.* Flores glomerati. Perianthium fructiferum 5-gonum, utriculum includens. Stamina 5. Stigmata 3–4, brevia v. elongata. Semen horizontale, rarius erectum, embryone imperfecte annulari. Herbæ glandulosæ, aromaticæ. Huc pertinent *C. ambrosioides*, Linn., Wight, Ic. t. 1786; *C. multifidum*, Linn., aliæque. AMBRINA, *Spach, Suites Buff.* v. 295. *Fenzl in Mart. Fl. Bras.* v. i. *t.* 46, 47.

3. *Botrydium.* Flores dichotome cymosi, sessiles. Perianthium fructiferum utriculum includens v. semi-includens, post utriculum delapsum persistens. Stamina 1–5. Stigmata brevia. Semen horizontale, embryone imperfecte annulari. Herbæ glandulosæ v. rarius glaberrimæ. *Sibth. Fl. Græc. t.* 253. *Nees, Gen. Fl. Germ. Monochl. n.* 56, *f.* 14, 15. BOTRYDIUM, *Spach, Suites Buff.* v. 298.

TELOXYS, *Moq. in Ann. Sc. Nat. ser.* 2, i. 289, *t.* 10, *et in DC. Prod.* xiii. ii. 59, est *Chenopodii* species e sectione *Botrydio*, etsi tota glaberrima, eglandulosa, foliis integerrimis.

4. *Orthosporum* (R. Br. non aliorum). Flores glomerati. Perianthium fructiferum erectum, utriculum includens. Stamina sæpissime solitaria. Stigmata 2, capillaria. Semen erectum, embryone imperfecte annulari. Herbæ glandulosæ. Species 4 Australianæ, *Benth. Fl. Austral.* v. 162, et una Chilensis, *Colla, Pl. Rar. Chil. t.* 50. Perianthii fructiferi segmenta in *C. cristato* inordinate ampliata cristataque, in *C. carinato* modice aucta.

5. *Blitum.* Flores glomerati. Perianthii segmenta 1–5, fructiferum baccatum, succulentum, utriculum includens. Stamina 1–5. Stigmata brevia. Semina omnia erecta v. in parte superiore glomeruli alia erecta alia horizontalia, embryone imperfecte annulari. Herbæ glabræ, glandulosæ v. leviter farinosæ. BLITUM, *Linn. Gen.* n. 14, *Gærtn. Fruct.* ii. *t.* 126. *Nees, Gen. Fl. Germ. Monochl. n.* 58. *Lam. Illustr. t.* 5. *Bot. Mag. t.* 276. MOROCARPUS, *Mœnch, Meth.* 342.

6. *Pseudoblitum.* Perianthium fructiferum vix v. non baccatum, sæpe breve. Cætera *Bliti.* Sect. *Orthosporum,* C. A. Mey. in Ledeb. Fl. Alt. i. 13, non R. Br. Hic includuntur *C. rubrum,* Linn., Gærtn. Fruct. i. t. 75, Nees, Gen. Fl. Germ. Monochl. n. 57, Fl. Dan. t. 1149; *C. glaucum,* Linn., Fl. Dan. t. 1151; et *C.* (*Blitum*) *antarcticum,* Hook. f. OXYBASIS, *Kar. et Kir. in Bull. Soc. Imp. Nat. Mosc.* 1841, 738, est fide Bungei in litt. *C. rubri,* Linn., forma depauperata.

7. *Rhagodioides,* Benth. Fl. Austral. v. 158. Perianthium fructiferum utriculum includens. Stamina 5. Stigmata 2, crassa, villosa. Ovarium tomentosum. Semen erectum. Frutex spinescens, habitu *Rhagodiæ.*

8. *Agathophyton.* Perianthium fructiferum utriculum semi-includens. Stamina 5. Stigmata 2–5, elongata. Semen erectum, embryone perfecte annulari. Herba glaberrima, eglandulosa. *Fl. Dan. t.* 579. AGATHOPHYTON, *Moq. in Ann. Sc. Nat. ser.* 2, i. 291, *t.* 10*c.* ORTHOSPORUM, *Nees, Gen. Fl. Germ. Monochl. n.* 58.

9. **Roubieva,** *Moq. in Ann. Sc. Nat. ser.* 2, i. 292, *t.* 10, *et in DC. Prod.* xiii. ii. 80.—Flores minuti, hermaphroditi v. abortu fœminei, ebracteati et ebracteolati. Perianthium urceolatum, breviter 5-lobum, lobis rotundatis, post anthesin accrescens, coriaceum, elongato-ellipsoideum v. obovoideum, ore mox clauso utriculum basi includens. Stamina 5, filamentis crassiusculis; antheræ ovoideæ. Discus 0. Ovarium globosum, compressum; stigmata 2–5, filiformia v. subulata, basi connata; ovulum subsessile. Utriculus perianthio aucto thecæformi inclusus, globosus, compressus, pericarpio tenuiter membranaceo friabili semini laxe adhærente. Semen erectum, orbiculare, leviter compressum, testa crustacea lævi; embryo annularis, albumen copiosum testæ adhærens cingens, radicula infera.—Herbæ ramosæ, glanduloso-puberulæ, odorem ambrosiacum spirantes. Folia parva, alterna, subsessilia, sinuato-dentata v. subpinnatifida. Perianthia fructifera pedicellata, dense conferta, sæpe subverticillata, apice rotundata v. retusa, basi attenuata, reticulatione nervosa, utriculum laxe includentia.

Species 2, Americæ tropicæ et temperatæ incolæ, quarum una in orbe vetere subspontanea. *Fenzl in Mart. Fl. Bras.* v. i. 151, *t.* 48.

Species adhuc confusæ sed bene distinctæ: 1. *R. multifida,* Moq. l. c., perianthio fructifero globoso. 2. *R. bonariensis,* Hook. f., perianthio fructifero elongato ellipsoideo.

10. **Beta,** *Linn. Gen. n.* 310.—Flores hermaphroditi, bracteati et 2-bracteolati. Perianthium urceolatum, basi ovario adhærens, fructiferum clausum induratum v. nuceum, 5-fidum; lobi erecti v. inflexi, dorso medio costati. Stamina 5, perigyna, filamentis subulatis; antheræ oblongæ. Ovarium semi-inferum et disco crassiusculo cinctum, depresso-globosum; stigmata 2–3, rarius plura, brevia, subulata, basi connata, intus papillosa; ovulum subsessile. Fructus infra medium perianthio indurato adnatus, vertice lobis ejus inclusus, pericarpio superne carnoso v. indurato semini non adhærente. Semen horizontale, orbiculare v. reniforme, rostellatum, testa coriacea lævi; embryo annularis v. fere annularis, albumen copiosum cingens, radicula centrifuga.—Herbæ glabræ, radice carnosa, caulibus subsucculentis erectis v. procumbentibus sulcatis. Flores parvuli, 3-ni v. glomerati, rarius solitarii, glomerulis axillaribus et in spicas terminales simplices v. paniculatas dispositis.

Species enumeratæ ad 13, sed ab auctoribus inordinate multiplicatæ, in Europa, Africa boreali, et Asia temperata indigenæ et cultæ. *Moq. in DC. Prod.* xiii. ii. 54. *Walp. Ann.* i. 565, iii. 302, 926, v. 727. *Boiss. Fl. Or.* iv. 898. *Gærtn. Fruct.* i. *t.* 75. *Nees, Gen. Fl. Germ. Monochl. n.* 67. *Waldst. et Kit. Pl. Rar. Hung. t.* 35. *Webb, Phytog. Canar.* iii. *t.* 201, 202. *Sibth. Fl. Græc. t.* 254. *Fl. Dan. t.* 1571.

11. **Oreobliton,** *Durieu et Moq. in Duchart. Rev. Bot.* ii. 428, *et Explor. Alger. t.* 79.—Flores hermaphrodati, ebracteati et ebracteolati. Perianthium basi demum induratum, 5-partitum; segmenta lineari-oblonga, obtusa, ecostata, fructifera stellatim patentia,

Stamina 5, disco perigyno inserta, filamentis brevibus subulatis basi dilatatis; antheræ magnæ, late oblongæ. Ovarium basi disco adnatum, ovoideum; stigmata 2, brevia, subulata, divaricata, basi connata; ovulum subsessile. Utriculus basi perianthio patente stipatus, globoso-ovoideus, pericarpio crustaceo rugoso semini non adhærente. Semen horizontale, testa tenuiter coriacea; embryo annularis, albumen parcum cingens, cotyledonibus planiusculis, radicula crassiuscula centrifuga.—Herba humilis, rupicola, glaberrima, caudice lignoso tortuoso, ramis numerosissimis erectis v. ascendentibus gracilibus flexuosis. Folia alterna, petiolata, elliptico- v. subrhombeo-ovata oblonga v. lanceolata, integerrima. Flores parvi, axillares, sessiles v. pedicellati, solitarii v. in ramulos breves dispositi.

Species 1, Algeriensis. *Moq. in DC. Prod.* xiii. ii. 58. *Coss. et Dur. in Bull. Soc. Bot. Fr.* ii. 367.

Tribus II. Atripliceæ.

12. **Spinacia,** *Linn. Gen. n.* 1112.—Flores dioici, rarissime hermaphroditi, ebracteati et ebracteolati. Fl. ♂: Perianthium 4–5-partitum; segmenta oblonga, obtusa, inappendiculata. Stamina 4–5, basi perianthii inserta, filamentis capillaribus; antheræ longe exsertæ, late didymæ. Discus et ovarii rudimenta 0. Fl. ♀: Perianthium subglobosum, 2–4-dentatum, tubo accrescente fructifero clauso utriculum includente inappendiculato v. basin versus spinis 2 oppositis elongatis aucto. Ovarium subglobosum; stigmata 4–5, capillaria, ima basi connata, longe exserta; ovulum subsessile. Utriculus perianthii tubo cartaligineo v. indurato inermi v. 2-spinoso inclusus, pericarpio membranaceo semini arctissime adhærente. Semen erectum, turgidum, leviter compressum, basi rostellatum, testa tenuiter coriacea; embryo annularis, albumen farinaceum cingens, radicula infera.—Herbæ annuæ, erectæ, glabræ. Folia alterna, petiolata, triangulari-ovata v. hastata, integerrima v. sinuato-dentata. Flores glomerati; glomeruli subglobosi, ♀ sæpius axillares, ♂ in spicas terminales interruptas dispositi, perianthiis fructiferis interdum connatis.

Species 4, Orientales, quarum 2 ubique cultæ. *Moq. in DC. Prod.* xiii. ii. 117. *Gærtn. Fruct.* ii. 126. *Nees, Gen. Fl. Germ. Monochl. n.* 66. *Lam. Ill. t.* 814. *Fenzl in Ledeb. Fl. Ross.* iii. 711. *Boiss. Fl. Or.* iv. 905. *Schkuhr, Handb. t.* 324. *Wight, Ic. t.* 818.

13. **Exomis,** *Fenzl; Moq. Chenop. Enum.* 49, *et in DC. Prod.* xiii. ii. 89, *excl. sp. n.* 2.—Flores monoici, cum paucis hermaphroditis. Fl. ♂ ebracteati et ebracteolati. Perianthium 5-partitum; segmenta obovata, concava, inappendiculata, ecostata. Stamina 5, basi perianthii inserta, filamentis complanatis basi connatis; antheræ exsertæ, didymæ. Discus et ovarii rudimenta 0. Fl. ♀ 1-3, inter bracteas 2 laterales oppositas folio stipatas æquales v. inæquales post anthesin non accrescentes sessiles. Perianthium 0. Ovarium ovoideum, compressum, furfuraceum; stigmata 2, v. in ovariis lateralibus 2 in intermedio 3, subulata, basi connata v. subdiscreta, undique papillosa; ovulum subsessile. Utriculus bracteis non inclusus, ovoideus, compressus, pericarpio tenui laxo friabili furfuraceo semini non adhærente. Semen erectum, globosum, compressum, v. ellipsoideum, testa dense coriacea fusca nitida; embryo annularis, albumen densum testæ adhærens cingens, radicula infera.—Frutex albo-furfuraceus, dichotome ramosissimus, ramis flexuosis tenuiter costatis. Folia parva, alterna, sessilia v. breviter petiolata, ovata lanceolata v. hastata, 1-nervia. Flores parvi; ♂ glomerati, glomerulis apices versus ramulorum axillaribus et in spicas terminales densifloras dispositis, ♀ cum masculis immixti v. sine ordine dispositi; bracteæ foliis longiores v. breviores, basi planæ v. concavæ.

Species 1, Africæ australis et ins. Sanctæ Helenæ incola. *E. albicans*, Moq., est *Atriplicis* species.

14. **Atriplex,** *Linn. Gen. n.* 1153.—Flores monoici v. dioici. Fl. ♂ ebracteati et ebracteolati. Perianthium 3–5-partitum; segmenta obovata v. oblonga, obtusa. Stamina 3–5, basi perianthii inserta, filamentis liberis v. basi connatis; antheræ didymæ. Ovarii rudimentum 0 v. [illegible] Fl. ♀ singuli 2-bracteolati; bracteolæ excrescentes, fructiferæ dilatatæ ba[illegible] m sæpe 2-labiatam fructiferam formantes, rarius

omnino liberæ. Perianthium 0, rarissime masculo consimile. Discus et staminum rudimenta 0. Ovarium ovoideum v. depresso-globosum; stigmata 2, subulata v. filiformia, basi connata; ovulum obliquum v. erectum funiculo brevi, v. inversum ab apice funiculi elongati suspensum. Utriculus bracteolis inordinate auctis inclusus, v. earum basibus immersus, pericarpio membranaceo semini rarius adhærente. Semen erectum v. inversum, rarius horizontale, testa membranacea coriacea v. fere crustacea; embryo annularis, albumen farinaceum cingens, radicula infera ascendente descendente v. rarius centrifuga.—Herbæ v. frutices plus minusve squamulis lepidotis operti v. furfuracei, v. cinerei. Folia alterna, rarius opposita, sessilia v. petiolata, linearia oblonga ovata deltoidea v. hastata, angulata sinuato-dentata v. integerrima. Flores glomerati, glomerulis axillaribus sessilibus v. in spicas simplices paniculatasve dispositis, masc. et fœm. sæpe immixti.

Species ad 100, regionum temperatarum et subtropicarum totius orbis incolæ, pleræque salsuginosæ. *Moq. in DC. Prod.* xiii. ii. 90. *Ledeb. Fl. Ross.* iii. 715; *Ic. t.* 41 *ad* 43, 46. *Boiss. Fl. Or.* iv. 906. *Wats. in Proc. Amer. Acad.* ix. 103, *et in Bot. Calif.* ii. 50, *ined. Bunge in Act. Hort. Petrop.* v. 642. *Benth. Fl. Austral.* v. 165. *Gærtn. Fruct. t.* 75. *Nees, Gen. Fl. Germ. Monochl. n.* 63. *Spach, Suites Buff. t.* 68. *Reichb. Iconogr. Eur. t.* 16. *Waldst. et Kit. Pl. Rar. Hung. t.* 103, 221, 250. *Schkuhr, Handb. t.* 347 *ad* 350. *Fl. Dan. t.* 1284–7, 1638, 2226, 2466. *Sibth. Fl. Græc. t.* 963. *Ten. Fl. Nap. t.* 249. *Delile, Fl. Egypt. t.* 52. *Wight, Ic. t.* 1787. *Colla, Pl. Rar. Chili, t.* 49.

Obione, *Gærtn. Fruct.* ii. 198 *t.* 126. *Moq. in DC. l. c.* 106. (Halimus, *Wallr. Sched. Crit.* 117. *Nees, Gen. Fl. Germ. Monochl. n.* 64). Genus quoad species europæas sat distinctum, bracteolis fructiferis altius connatis, utriculo sæpe basi ejus adnato, semine inverso et testa tenuiore, arcte tamen cum *Atriplice* connectitur mediantibus speciebus pluribus exoticis, et a botanicis recentioribus rejicitur. Species genuinæ sunt: *A. pedunculata*, Linn., Fl. Dan. t. 304; *A. portulacoides*, Linn.; Fl. Dan. t. 1889, *A. vernicifera*, Bieb., Ledeb. Ic. Fl. Ross. t. 144; aliæ, plus minus ambiguæ, delineatæ in *Sibth. Fl. Græc. t.* 962, *Wight, Ic. t.* 1788 *ad* 1790.

Theleophyton, *Moq. in DC. l. c.* 115 (Atriplex *sect.* Theleophyton, *Hook. f. in Hook. Lond. Journ.* vi. 279; *Fl. Tasman.* i. 315, *t.* 95. *Benth. Fl. Austral.* v. 179) a congeneribus differt epidermide cellulis crystallinis consperso, et utriculo bracteolis contrarie compresso.

Pterochiton, *Torr. in Frem. Rep.* 318, est *A. canescens*, James, species bracteolis late 2–4-alatis thecam clausam efficientibus, ut in *Grayia*, sed radicula supera et bracteolæ non conduplicatæ.

Endolepis, *Torr. in A. Gray, Bot. Stevens Exped.* 47, *t.* 3, est *Atriplex Endolepis*, S. Wats. in Proc. Amer. Acad. ix. 110 (*Kochia dioica*, Nutt.).

15. **Grayia,** *Hook. et Arn. Bot. Beech. Voy.* 387.—Flores dioici, rarius monoici. Fl. ♂ ebracteati et ebracteolati. Perianthium 4–5-partitum; segmenta obovata, incurva, inappendiculata, ecostata. Stamina 4–5, disco depresso inserta, filamentis subulatis; antheræ inclusæ, magnæ, didymæ. Ovarii rudimenta 0? Fl. ♀ 2-bracteolati, bracteolæ conduplicatæ, obcompressæ, carinatæ, fructiferæ dorso latissime alatæ, marginibus connatis. Perianthium 0. Ovarium ovoideum, compressum; stigmata 2, filiformia; ovulum erectum, subsessile. Utriculus theca (e bracteis 2 constante) orbiculari obcompressa latissime 2- rarius 3-alata utrinque 2-loba reticulatim venosa inclusus, orbicularis, compressus, pericarpio membranaceo semini non adhærente. Semen erectum, orbiculare, testa tenuiter coriacea, brunnea; embryo annularis, gracilis, albumen farinaceum cingens, cotyledonibus compressis, radicula elongata infera.—Frutices erecti, ramosi, rigidi, ramulis interdum spinescentibus, partibus novellis furfuraceis. Folia alterna, sessilia, linearia obovata v. spathulata, obtusa, integerrima, carnosula. Flores ♂ minuti, glomerati, axillares, pedicellati, ♀ racemosi. Fructus pro planta magnus, pendulus.

Species 2, Americæ boreali-occidentalis incolæ. *Moq. in DC. Prod.* xiii. ii. 119. *Wats. Bot. Calif.* ii. 56 *ined. Hook. Ic. Pl. t.* 271. *A. Gray in Proc. Amer. Acad.* xi. 101.

16. **Suckleya,** *A. Gray in Proc. Amer. Acad.* xi. 103.—Flores monoici. Fl. ♂ ebracteati et ebracteolati. Perianthium subglobosum, membranaceum, 3–4-partitum; segmenta 2 opposita cæteris majora, spathulata, obtusa, inappendiculata. Stamina 3–4, basi perianthii inserta, filamentis brevibus latiusculis planis; antheræ didymæ. Ovarii rudimentum conicum. Fl. ♀ 2-bracteolati; bracteolæ conduplicatæ, obcompressæ,

carinatæ, infra medium connatæ, fructiferæ dorso anguste alatæ, alis crenulatis. Ovarium late ovoideum, compressum; stigmata 2, brevia, filiformia; ovulum ab apice funiculi elongati suspensum. Utriculus theca (e bracteis 2 constante) triangulari-ovata basi hastata apice 2-fida inclusus, late ovoideus, subacutus, compressus, pericarpio tenuiter membranaceo semini non adhærente. Semen inversum, orbiculare, compressum, testa tenuiter coriacea brunnea; embryo hippocrepicus v. fere annularis, albumen copiosum cingens, radicula supera.—Herba carnosula, tenuiter furfuracea, ramis ascendentibus foliosis. Folia alterna, petiolata, ovata orbicularia v. subrhombea, repando-dentata. Flores minuti, glomerati, glomerulis axillaribus, ♂ in ramulis superiores.

Species 1, Montium Scopulosorum Americæ borealis incola. *A. Gray, Bot. Stevens Exped.* 47, *t.* 4 (*Obione*). *S. Wats. in Proc. Amer. Acad.* ix. 111 (*Atriplex*). Bracteolæ ut in *Grayia* conduplicatæ, axi contrario compressæ, nec ut in *Atriplice* planæ v. concavæ.

17. **Eurotia,** *Adans. Fam.* ii. 260. (Krascheninnikovia, *Güldenst. in Nov. Comm. Petr.* xvi. 548 t. 17. Diotis, *Schreb. Gen.* 633. Güldenstædtia, *Neck. Elem.* ii. 204. Ceratospermum, *Pers. Syn.* ii. 551.)—Flores dioici v. monoici. Fl. ♂ apices versus ramulorum dense spicatim congesti, ebracteati et ebracteolati. Perianthium 4-partitum; segmenta 4, obovata, concava, obtusa, inappendiculata, ecostata. Stamina 4, filamentis filiformibus; antheræ exsertæ, majusculæ, didymæ. Discus et ovarii rudimenta 0. Fl. ♀ axillares, 2-bracteati; bracteæ conduplicatæ, obcompressæ, connatæ, apicibus liberis, longissime sericeo-pilosæ, demum clausæ, utriculum includentes. Perianthium 0. Ovarium ellipsoideum, compressum, sericeum; stigmata 2, filiformia, papillosa, basi connata; ovulum sessile. Utriculus in theca (e bracteis 2 constante) obcompressa clausa coriacea venosa apice 2-cornuta longe sericeo-villosa demum sæpe longitrorsum 4-valvi inclusus, ellipsoideus, compressus, pericarpio membranaceo semini non adhærente. Semen obovato-cuneiforme, compressum, basi rostellatum, testa membranacea albumini adhærente; embryo hippocrepicus, cotyledonibus lineari-oblongis radicula elongata infera latioribus.—Fruticuli v. herbæ, erectæ stellato-tomentosæ v. lanuginosæ, ramosæ, ramulis teretibus. Folia parva, alterna v. fasciculata, sessilia v. breviter petiolata, lineari-oblonga ovata v. subcordata, obtusa, integerrima, marginibus recurvis. Flores minuti, villis bractearum fl. ♀ sæpe argenteis v. castaneis nitidis.

Species 3, v. unius varietates, Rossiæ australis, Asiæ occidentalis et centralis, Indiæ boreali-occidentalis, et Americæ boreali-occidentalis incolæ. *Moq. in DC. Prodr.* xiii. ii. 120. *S. Wats. Bot. Calif.* ii. 55, *ined. Gært. Fruct.* ii. 210, *t.* 128 (*Axyris*). *Lam. Ill. t.* 753, *f.* 1 (*Axyris*). *Jacq. Ic. Rar. t.* 189 (*Axyris*). *Nees, Gen. Fl. Germ. Monochl. n.* 65 (*Diotis*).

Cotyledones in specie Californica (ut bene notavit S. Watson) lati viridesque, in Asiatica angustiores et albi.

18. **Ceratocarpus,** *Linn. Gen. n.* 1035.—Flores monoici. Fl. ♂ minimi, ebracteati et ebracteolati. Perianthii tubus brevis, infundibularis; segmenta 2, hyalina, obtusa, glabra. Stamen 1, filamento brevi; anthera magna, didyma, inclusa. Discus et ovarii rudimenta 0. Fl. ♀ bracteis 2 conduplicatis obcompressis arcte connatis dorso longe 2-aristatis inclusi. Perianthium 0. Ovarium minutum, orbiculare, pilosum; stigmata 2, capillaria, undique papillosa, basi connata; ovulum sessile. Utriculus theca (e bracteis 2 constante) clausa obcuneata coriacea 2-spinosa complanata inclusus, elongato-obovoideus, compressus, apice setosus, pericarpio tenuissimo semini arctissime adhærente. Semen erectum, utriculo conforme, testa membranacea; embryo elongato-hippocrepicus, albumen parcum testæ adhærens cingens, cotyledonibus elongatis acutis viridibus, radicula gracili infera.—Herba humilis, annua, stellatim puberula, dichotome ramosissima, ramulis intertextis divaricatis ultimis acicularibus. Folia alterna, in plantis junioribus elongato-lanceolata, apice spinescentia, 1-nervia; in maturis acicularia v. pungentia, rigida. Flores axillares, ♂ in axillis supremis, valde inconspicui, solitarii v. fasciculati; ♀ numerosi, solitarii.

Species 1, Asiæ occidentalis a Persia ad Affghanistaniam indigena. *Moq. in DC. Prod.* xiii. ii. 121. *Gærtn. Fruct.* ii. *t.* 127. *Lam. Ill. t.* 741.

TRIBUS III. CAMPHOROSMEÆ.

19. **Axyris**, *Linn. Gen. n.* 1047.—Flores monoici, ebracteati et ebracteolati, pilosi v. villosi. Fl. ♂ superiores, minuti. Perianthium hyalinum, 3–5-partitum; segmenta parva, obovata v. elliptica. Stamina 2–5, filamentis linearibus; antheræ didymæ, exsertæ. Discus et ovarii rudimenta 0. Fl. ♀ solitarii, axillares. Perianthium 3-4-partitum, segmenta inæqualia, antico et postico sæpius majoribus, demum scariosa, fructifera immutata v. parum aucta. Discus 0. Ovarium minutum, orbiculare, compressum; stigmata 2, filiformia, sæpius longissima, basi connata; ovulum sessile. Utriculus perianthio inclusus, obovoideo-cuneatus, compressus v. sphæricus, apice breviter alatus v. cristatus, crista 2-loba v. cristis 2 auriculæformibus rarius evanidis, pericarpio membranaceo semini arcte adhærente sæpe excentrice striato. Semen erectum, cuneato-obovoideum, compressum, testa membranacea; embryo albus, gracilis, hippocrepicus, albumen copiosum grosse granulosum cingens, cotyledonibus elongatis compressis, radicula infera. —Herbæ annuæ, stellato-pilosæ v. tomentosæ v. glabriusculæ. Folia alterna, breviter petiolata, ovata v. lanceolata, integerrima. Flores ♂ sæpissime in glomerulos terminales dispositi, staminibus cum perianthii segmentis irregulariter immixtis, rarius solitarii, ♀ in axillis fere omnibus solitarii v. masculis immixti.

Species 5–6, Asiæ borealis et centralis incolæ, quarum una etiam in America maxime boreali-occidentali indigena. *Moq. in DC. Prod.* xiii. ii. 116, *excl. sp. n.* 4 *et* 6. *Fenzl in Ledeb. Fl. Ross.* iii. 712. *Gmel. Fl. Sib.* iii. *t.* 3, 4, *male. Schkuhr, Handb. t.* 285 *b. A. sphærosperma*, Fisch., fructu sphærico acute marginato apice exappendiculato a nobis non visa.

20. **Microgynœcium**, *Hook. f. gen. nov.*—Flores monoici, minuti. Fl. ♂ superiores, ebracteati et ebracteolati. Perianthium hyalinum, 5-lobum, lobis obtusis. Stamina 1–4, basi perianthii inserta, filamentis filiformibus; antheræ late didymæ, longe exsertæ. Fl. ♀ intra bracteolas 2 axillares laterales sessiles, solitarii v. conferti; bracteolæ herbaceæ, ovatæ, acutæ, inter se liberæ, fructiferæ immutatæ. Perianthium 0. Ovarium oblique orbiculare; stigmata 2, capillaria, basi connata; ovulum sessile. Utriculus oblique ovoideus, turgidus, compressus, processubus conicis conspersus, et apicem versus cristis minutis 1–2 auriculæformibus auctus, pericarpio tenuissimo semini laxe adhærente. Semen erectum, utriculo conforme, testa tenuiter coriacea lævi; embryo gracilis, albidus, hippocrepicus, albumen grosse granulosum cingens, cotyledonibus elongatis semiteretibus, radicula infera.—Herba pusilla, annua, humifusa, ramosa, glaberrima v. sparsissime farinosa. Folia alterna, petiolata, ovata, acuta, integerrima. Flores minimi, inter folia absconditi, glomerati.

Species 1, Himalayæ Tibeticæ incola. Genus anomalum, *Atriplicem* quoad indumentum folia et flores ♀ nudos, et *Exomidem* quoad bracteas, in mentem revocans; sed flores ♂ utriculus et semina omnino *Axyridis*.

21. **Camphorosma**, *Linn. Gen. n.* 164. (Camforosma, *C. A. Mey. in Led. Fl. Alt.* i. 150.)—Flores hermaphroditi v. polygami, in spicas breves dispositi, bracteati, ebracteolati. Perianthium oblongum, compressum, hirsutum v. ciliatum, 4–5-dentatum, dentibus 2 lateralibus nervis crassioribus, fructiferum immutatum ore fere clauso. Stamina 4-5, hypogyna, filamentis elongatis compressis; antheræ magnæ, oblongæ, exsertæ. Discus 0. Ovarium late ovoideum, in stylum elongatum gracilem attenuatum, stigmatibus 2–3 capillaribus undique papillosis; ovulum subsessile. Utriculus perianthio membranaceo inclusus, obovoideus v. oblongus, rectus v. leviter obliquus, compressus, pericarpio membranaceo semini non adhærente. Semen erectum, obovoideo-cuneatum, compressum, testa tenuiter coriacea; embryo hippocrepicus, viridis, albumen testæ adhærens cingens, radicula infera.—Fruticuli v. herbæ basi lignosæ, plus minusve tomentosæ, ramis floriferis sæpius elongatis erectis v. ascendentibus. Folia alterna, sessilia, subulata v. acicularia, in ramulos breves dense squarrosa. Flores in spiculas apices versus ramulorum terminales et laterales dispositi, intra bracteas reconditi.

Species 4 v. 5, Europæ australis et Asiæ centralis et occidentalis incolæ. *Moq. in DC. Prod.* xiii. ii. 125. *Walp. Ann.* v. 720. *Gærtn. f. Fruct.* iii. *t.* 213. *Lam. Ill. t.* 86. *Nees, Gen. Fl. Germ. Monochl. n.* 60. *Waldst. et Kit. Pl. Rar. Hung. t.* 63. *Pall. Ill. Pl. t.* 57, 58.

22. **Panderia,** *Fisch. et Mey. Ind.* ii. *Sem. Hort. Petrop.* 46.—Flores hermaphroditi et fœminei, ebracteati et ebracteolati. Perianthium urceolatum v. turbinatum, hirsutum, æqualiter 5-lobum ; lobi dorso infra apicem tuberculati v. appendice parva transversa aucti, fructiferi immutati conniventes. Stamina 5, hypogyna, filamentis compressis ; antheræ late oblongæ, exsertæ. Discus 0. Ovarium ovoideum, compressum, subacutum ; stylus brevis, stigmatibus 2 capillaribus ; ovulum subsessile. Utriculus perianthio inclusus, orbicularis, compressus, pericarpio membranaceo semini adhærente. Semen erectum, late obovoideum, leviter compressum, testa coriacea ; embryo hippocrepicus, albumen testæ adhærens cingens, radicula infera.—Herbæ annuæ, erectæ, ramosæ, sericeo-pilosæ, caulibus ramulisque gracilibus. Folia alterna, sessilia, parva, linearia v. oblongo-lanceolata, obtusa, integerrima. Flores minuti, solitarii v. 2–4-ni, sessiles, secus ramulos axillares et in spicas terminales foliatas dispositi, pilis sericeis immersi.

Species 1 (an plures?) Asiæ occidentalis et centralis incola. *Moq. in DC. Prod.* xiii. ii. 124. *Boiss. Fl. Or.* iv. 919. Planta cum *Salsola arenaria*, *Kochia Sieversiana* et *Echinopsilo hyssopifolio* in herbariis confusa.

23. **Kirilovia,** *Bunge, Del. Sem. Hort. Dorpat.* 1843–7.—Flores hermaphroditi et fœminei, ebracteati et ebracteolati. Perianthium oblongo-ellipsoideum, compressum, hirsutum, membranaceum, ore parvo 4–5-dentato, fructiferum immutatum. Stamina 4–5, hypogyna, filamentis elongatis compressis ; antheræ late oblongæ, exsertæ. Discus 0. Ovarium ovoideum, in stylum attenuatum, stigmatibus 2 filiformibus undique papillosis ; ovulum subsessile. Utriculus perianthio sicco inclusus, obovoideus, compressus, pericarpio membranaceo semini non adhærente. Semen erectum, obovoideum v. sub-cuneiforme, compressum, marginibus rotundatis, testa coriacea ; embryo elongato-hippocrepicus, albumen testæ arcte adhærens cingens, cotyledonibus elongatis, radicula infera.—Herbæ annuæ, graciles, sericeo-pilosæ, ramosæ. Folia alterna, opposita v. sub-verticillata, sessilia, ovata linearia v. lanceolata, acuta, integerrima. Flores minuti, inter folia occlusi, dense sericei v. villosi.

Species 3 v. 4, Asiæ centralis et Affghanistaniæ incolæ. *Moq. in DC. Prod.* xiii. ii. 125 et 117 (*Axyris villosa*). Genus habitu, forma perianthii elongati 5-dentati et dentibus non tuberculatis a *Panderia* diversum.

Tribus IV. Corispermeæ.

24. **Corispermum,** *Linn. Gen. n.* 12.—Flores hermaphroditi, foliaceo-bracteati, ebracteolati. Perianthium minutum, compressum ; segmenta 1–3, inæqualia, postico majore, erecta, late oblonga v. lanceolata, tenuiter 1-nervia, scariosa, fructifera immutata. Stamina 1–5, hypogyna ; filamentis inæqualibus compressis ; antheræ late oblongæ, longe exsertæ. Ovarium e perianthio exsertum, ovatum, compressum, marginatum ; stigmata 2, subulata, recurva, basi connata; ovulum subsessile. Utriculus ellipsoideus v. orbicularis, compressus, plano-convexus, induratus, ambitu marginatus v. alatus, pericarpio membranaceo semini arcte adhærente. Semen erectum, plano-compressum, testa pallida coriacea ; embryo gracilis, annularis, albumen copiosum testæ arcte adhærens cingens, radicula infera.—Herbæ annuæ, graciles, diffuse ramosæ, demum rigidæ, glabræ v. pubescentes, ramis sæpe divaricatis. Folia alterna, sessilia, angusta, rigidula, integerrima, floralia latiora sæpius nervosa et albo-marginata. Flores in spicas breves et densifloras v. elongatas et laxifloras ramulos terminantes dispositi, bracteis velati. Perianthii foliola et utriculi ala rarius evanida.

Species ad 8, Europæ australis et Asiæ centralis et occidentalis incolæ, una in China, altera in America boreali-occidentali indigena. *Moq. in DC. Prod.* xiii. ii. 140. *Walp. Ann.* v. 732. *S.*

Wats. Bot. Calif. ii. 56, *ined.* *Gærtn. Fruct.* i. *t.* 75. *Nees, Gen. Fl. Germ. Monochl.* *n.* 75. *Lam. Ill. t.* 5. *Sibth. Fl. Græc. t.* 1. *Pall. Fl. Ross. t.* 98.

25. **Anthochlamys,** *Fenzl in Endl. Gen. Pl.* 300.—Flores hermaphroditi, spicati, foliaceo-bracteati, ebracteolati. Perianthium compressum, tenuissime membranaceum, 5-partitum; segmenta erecta, oblonga, plana, apice 2-loba, tenuiter 1-nervia, fructifera immutata. Stamina 5, basi perianthii inserta, subperigyna, filamentis compressis perianthio æquilongis; antheræ lineari-oblongæ. Discus inconspicuus. Ovarium orbiculare, complanatum; stigmata 2, brevia, crassa, obtusa, suberecta, basi connata; ovulum subsessile. Fructus orbicularis, complanatus, ala scariosa circumdatus, basi perianthii involutus, pericarpio tenui semini arcte adhærente. Semen erectum, orbiculare, compressum, testa membranacea; embryo annularis, albumen copiosum testæ adhærens cingens, radicula gracili infera.—Herba annua, ramosa, glaberrima, *Polygalam* referens, ramis divaricatis fere nudis viridibus. Folia pauca, sparsa, sessilia, inferiora elliptica, obtusa v. mucronata; superiora linearia, acuta; floralia parva, ovato-lanceolata. Flores parvi, in spicas ramulos terminantes dispositi, in axillis bractearum solitarii, sessiles.

Species 1, Persiæ et regionis Caucasicæ incola. *Moq. in DC. Prod.* xiii. ii. 142. *Jaub. et Spach, Ill. Pl. Or.* iii. *t.* 299.

26. **Agriophyllum,** *Bieb. Fl. Taur. Cauc.* iii. 6, *in adnot.*—Flores hermaphroditi, bracteati, ebracteolati, in spiculas breves longe spinescentes dispositi. Perianthium complanatum, 5-partitum, scariosum; segmenta a basi libera, erecta, obonga v. lanceolata, obtusa, apice erosa, antico majore, 2 posticis angustioribus, lateralibus anguste linearibus, fructifera immutata. Stamina 5 v. pauciora, hypogyna, filamentis compressis; antheræ breves, oblongæ, subexsertæ. Ovarium complanatum, ala rigida superne in laminam erosam v. late 2-cornutam producta; stylus basi dilatatus, complanatus, stigmatibus 2 erecto-recurvis intus papillosis; ovulum subsessile. Fructus glaber v. pubescens, complanatus, chartaceus, oblongus v. fere orbicularis, late alatus v. crasse coriaceus et superne in spinas 2 rigidas stylo rigido terminatas productus, loculo in parte inferiore fructus orbiculari v. ellipsoideo, pericarpio semini non adhærente demum facie dorsali fenestratim v. irregulariter rupto. Semen erectum, orbiculare v. ellipsoideum, testa tenuiter coriacea; embryo gracilis, annularis, albumen copiosum testæ arcte adhærens cingens, radicula infera.—Herbæ annuæ, rigidæ, a basi divaricatim ramosæ, glabræ v. pilis stellatis tomentellæ. Folia alterna, sessilia v. petiolata, ovata orbicularia v. lineari-lanceolata, integerrima, pungentia, 3-∞-nervia nervis parallelis v. penninervia. Flores in axillis bractearum solitarii; bracteæ imbricatæ, a basi vaginante recurvæ et longe spinosæ, axillis interdum barbellatis.

Species 4, Asiæ centralis et occidentalis incolæ. *Moq. in DC. Prod.* xiii. ii. 139. *Walp. Ann.* v. 731. *Pall. Fl. Ross. t.* 99 (*Corispermum*).

Tribus V. Polycnemeæ.

27. **Polycnemum,** *Linn. Gen. n.* 53.—Flores hermaphroditi, axillares, solitarii, 2-bracteolati. Perianthium membranaceum, 5-partitum; segmenta subæqualia, subulato-lanceolata, acuminata, erecta, fructifera immutata. Stamina 1–5, sæpius 3, disco tenui inserta, filamentis basi connatis subulatis; antheræ didymæ. Ovarium oblongo-ovoideum, compressum v. late ovoideum; stigmata 2, parva, subulata, basi connata; ovulum ab apice funiculi suspensum. Utriculus perianthio inclusus, compressus, ovoideo-oblongus umbonatus v. subglobosus, pericarpio membranaceo semini non adhærente. Semen inversum, lenticulare, testa crustacea granulata; embryo annularis, albumen farinaceum cingens, cotyledonibus semiteretibus, radicula ascendente v. supera.—Herbæ annuæ, prostratæ, ramosæ, glabræ v. pubescentes, ramulis verrucosis foliosis. Folia alterna, conferta, sessilia, subulata, basi dilatata, rigida. Flores minuti, in axillis foliorum solitarii, sessiles; bracteolæ subulatæ, pungentes, perianthio æquilongæ v. longiores.

Species 3 v. 4, Europæ mediæ et australis, Africæ borealis, et Asiæ occidentalis incolæ, in Bonaria introductæ. *Moq. in DC. Prod.* xiii. ii. 334. *Gærtn. Fruct. t.* 128. *Nees, Gen. Fl. Germ. Monochl. n.* 76. *Jacq. Fl. Austr. t.* 365.

Genus inter *Amarantaceas* et *Chenopodiaceas* quasi medium.

28. **Hemichroa,** *Br. Prod.* 409.—Flores hermaphroditi, axillares, solitarii, 2-bracteolati. Perianthium subherbaceum, 5-partitum; segmenta erecta, ovata, acuminata, æqualia, concava, 3-nervia, fructifera immutata. Stamina 5, v. 2 unilateralia, hypogyna, filamentis subulatis ima basi connatis; antheræ breviter oblongæ v. didymæ. Ovarium orbiculare v. late ovoideum, rectum v. valde obliquum, compressum, in stylum brevem v. elongatum attenuatum, stigmatibus 2 brevibus; ovulum ab apice funiculi basilaris pendulum. Utriculus perianthio inclusus, ovoideus v. orbicularis, compressus, acutus, pericarpio membranaceo semini non adhærente. Semen inversum, reniforme v. lenticulare, rostellatum, testa crustacea castanea nitida; embryo imperfecte annularis, albumen farinaceum cingens, cotyledonibus linearibus, radicula ascendente v. supera.—Herbæ v. fruticuli humiles, glabri, succulenti, ramulis teretibus. Folia alterna, sessilia, linearia, semiteretia, mucronulata, floralia basi dilatata. Flores sessiles, parvi, albi; bracteolæ rigidæ, late ovatæ, scariosæ, perianthio breviores.

Species 2 v. 3, littorales, Australienses. *Benth. Fl. Austral.* v. 211. *F. Muell. Lithogr. Pl. Vict. t.* 77, *ined.*

29. **Nitrophila,** *S. Wats. in Bot. King's Exped.* 297; *Bot. Calif.* ii. 43 *ined.*—Flores hermaphroditi, 2-bracteolati, bracteolis foliaceis florem excedentibus. Perianthium chartaceo-membranaceum, 5-partitum; segmenta erecta, ovato-oblonga, acuta, concava, 1-nervia, interiora minora, fructifera immutata. Stamina 5, perigyna; filamentis filiformibus basi inter se liberis; antheræ subglobosæ. Ovarium rhombeo-ovoideum; stylus filiformis, stigmatibus 2 subulatis; ovulum ab apice funiculi suspensum. Utriculus perianthio inclusus, ovoideus, pericarpio membranaceo semini non adhærente. Semen inversum, lenticulare, margine acuto, testa nitidula nigra; embryo . . .—Herba pusilla, glabra, subsucculenta, dichotome ramosa, ramis subarticulatis. Folia opposita, sessilia, lineari-subulata, acuta, semi-teretia, integerrima, carnosula. Flores parvi, axillares, solitarii, sessiles, albi.

Species 1, Americæ boreali-occidentalis incola. *Moq. in DC. Prod.* xiii. ii. 279 (*Banaliæ sect. Idiopsis*). Seminum a nobis non visorum characterem ex descriptione S. Watsoni excerpsimus.

TRIBUS VI. CHENOLEÆ.

30. **Chenolea,** *Thunb. Nov. Gen.* 10.—Flores hermaphroditi et fœminei, axillares, ebracteati et bracteolati. Perianthium turbinatum globosum v. orbiculare et depressum, villosum v. tomentosum, rarissime glabrum, 5-lobum, lobis incurvis, fructiferum auctum lobis dorso in spinas v. cornua patentia productis rarius inermibus v. inappendiculatis. Stamina 5, hypogyna, filamentis compressis brevibus v. elongatis; antheræ oblongæ, exsertæ. Discus 0. Ovarium late ovoideum, in stylum brevem v. elongatum attenuatum, stigmatibus 2 v. 3 capillaribus undique papillosis; ovulum subsessile. Utriculus perianthio crustaceo v. coriaceo sæpe valde depresso lobis inflexis dorso productis inclusus, pericarpio membranaceo v. vertice indurato semini non adhærente. Semen horizontale, orbiculare, ad hilum emarginatum v. rostellatum, testa membranacea v. tenuiter coriacea; embryo annularis, gracilis v. robustus, albumen parcum testæ adhærens cingens, radicula centrifuga.—Herbæ basi lignosæ, rarius annuæ, v. fruticuli erecti et decumbentes, sæpissime tomentosi sericei v. pilosi, ramulis teretibus v. angulatis. Folia alterna, sessilia, linearia v. lanceolata, interdum teretia et carnosula, integerrima. Flores minuti, solitarii v. glomerati, sessiles, glomerulis interdum lana immersis.

Species ad 20, Europæ mediæ, Africæ borealis, Asiæ temperatæ, et Australiæ incolæ, una boreali-americana, altera Capensis. Genus in sectiones sequentes dividitur:—

1. *Euchenolea.* Perianthium fructiferum immutatum, lobis dorso infra apicem minute tuberculatis.

Præter typum generis, *C. diffusam*, Thunb., speciem capensem (*Echinopsilon diffusum*, *Moq.* in DC. Prod. xiii. ii. 137), hic includimus *C. lanatam*, Moq. l. c. 129; *C. canariensem*, Webb. Phytog. Canar. t. 200; *C. carnosam* et *C. Dallachyanam*, Benth. Fl. Austral. v. 190, 191.

2. *Echinopsilon.* Perianthii lobi omnes v. nonnulli dorso sub apice in spinas producti. *Waldst. et Kit. Pl. Rar. Hung. t.* 106 (*Salsola*). *Pall. Ill. Pl. t.* 32 *ad* 38, 45, 46 (*Suæda*). ECHINOPSILON, *Moq. in Ann. Sc. Nat. ser.* 2, ii. 127, *et in DC. l. c.* 134, *sp.* 1–8. *Walp. Ann.* v. 929. WILLEMETIA, *Mærckl. in Schrad. Journ. Bot.* i. 329. VILLEMETIA, *Moq. in Ann. Sc. Nat. ser.* 2, i. 206, *t.* 9. BASSIA, *All. Misc. Taur.* iii. 177, *t.* 4, *ex Moq.* KOCHIÆ sect. Bassia, *Boiss. Fl. Or.* iv. 925.

LONDESIA, *Fisch. et Mey. Ind.* ii. *Sem. Hort. Petrop.* 40 (*Kochia latifolia*, Fres. *var. inermis*, Boiss. Fl. Or. iv. 927) est *Chenoleæ* species, perianthio abbreviato tenuissimo longissime villoso parte inferiore utriculi arctissime adhærente: planta *Kochiam* supra dictam (quæ *Echinopsilon eriphorum*, Moq.) miro modo simulans, et cum *Kirilovia eriantha* in herbariis confusa.

De formis singularibus australiensibus confer Benth. Fl. Austral. v. 189, quarum *C. Muelleri*, Benth. et *C. sclerolænoides*, F. Muell. (ERIOCHITON, *F. Muell. 2nd Gen. Report.* 15) transitum ad *Sclerolænam* monstrant.

31. **Kochia,** *Roth in Schrad. Journ. Bot.* i. 307 *t.* 2.—Flores hermaphroditi et fœminei, axillares, ebracteati et ebracteolati. Perianthium subglobosum urceolatum v. orbiculare et depressum, 5-lobum, lobis incurvis, fructiferum coriaceum, lobis dorso v. tubo infra lobos in alas horizontales membranaceas v. scariosas distinctas v. confluentes excrescentibus. Stamina 5, hypogyna, filamentis brevibus v. elongatis compressis; antheræ magnæ, late oblongæ v. didymæ, exsertæ. Discus 0. Ovarium late ovoideum, in stylum sæpe gracilem attenuatum, stigmatibus 2–3 capillaribus undique papillosis; ovulum subsessile. Utriculus perianthio coriaceo lobis inflexis inclusus, depresso-globosus, pericarpio membranaceo v. vertice coriaceo semini non adhærente. Semen horizontale, orbiculare, depressum, ad hilum emarginatum v. breviter rostellatum, testa membranacea; embryo gracilis v. robustus, annularis, albumen parcum testæ adhærens cingens, viridis, cotyledonibus plano-convexis, radicula centrifuga.—Herbæ basi sæpe lignosæ v. fruticuli, villosi sericeo-tomentosi v. rarius glabri, ramis gracilibus sæpe brachiatis. Folia alterna, rarissime subopposita, sessilia, linearia v. oblonga, rarius lanceolata, plana teretia v. carnosula, interdum minuta, integerrima. Flores parvi v. minuti, sessiles, solitarii v. glomerati.

Species ad 30, Europæ mediæ, Asiæ temperatæ, et Africæ borealis et australis incolæ, una in America boreali-occidentali, altera in India tropica indigena.—*Moq. in DC. Prod.* xiii. ii. 130, *excl. sp. n.* 11. *Walp. Ann.* i. 567; iii. 303. *Boiss. Fl. Or.* iv. 923 (*sect. Eukochia*). *S. Wats. Bot. Calif.* ii. 45, *ined. Nees, Gen. Fl. Germ. Monochl. n.* 59, *f.* 1 *ad* 17. *Jacq. Fl. Austr. t.* 294 (*Salsola*). *Waldst. et Kit. Pl. Rar. Hung. t.* 78 (*Salsola*). *Pall. Ill. Pl. t.* 10, 11 (*Salsola*). *Guss. Enum. Pl. Inar. t.* 13. *Wight, Ic. t.* 1791. *F. Muell. Lithogr. Pl. Vict. t.* 84, *ined.*

Genus polymorphum charactere nimis artificiale a *Chenolea* distinguendum. Inter species australienses *K. triptera*, Benth., insignis est tubo perianthii infra alas horizontales longitrorsum 3-alato; *K.? pyramidata*, Benth., perianthio fructifero ultra alas in tubum pyramidatum producto; *K. brachyptera*, F. Muell. (SCLEROCHLAMYS, *F. Muell. in Trans. Phil. Inst. Vict.* ii. 76) perianthio fructifero vertice lato plano 5-gono, et tubo turbinato costato ut in *Enchylæna marginata*. *K. stelligera*, F. Muell., ala perianthii fructiferi brevi horizontali stellatim 10–12-spinosa transitum præbet ad *Chenoleæ* sectionem *Echinopsilon*.

MAIREANA, *Moq. in Ann. Sc. Nat. ser.* 2, xv. 97, *t.* 13, et in *DC. Prod.* xiii. ii. 129 (*K. villosa*, Lindl.) a *Kochiis* typicis differt ala perianthii fructiferi continua e tubo (non e lobis) evoluta, ut in aliis speciebus australiensibus.

32. **Didymanthus,** *Endl. Nov. Stirp. Dec.* 7. *Iconogr. t.* 100.—Flores hermaphroditi v. fœminei, gemini, basibus confluentibus, axillares, ebracteolati. Perianthii tubus cylindraceus; lobi 4, breves, crassi, incurvi, coriacei, venosi, dorso infra apicem incrassati, fructiferi dorso basi in alas horizontales obovato-rotundatas excrescentes. Stamina 3–5, hypogyna, filamentis linearibus compressis; antheræ breviter oblongæ, inclusæ. Discus 0. Ovarium ovoideum, subtruncatum, vertice in stylum attenuatum, stigmatibus 2 filiformibus undique papillosis; ovulum ab apice funiculi elongati suspensum. Utriculus basi tubi perianthii cylindracei sub apice late stellatim alati inclusus, pyriformis v. oblongo-cylin-

draceus, pericarpio membranaceo vertice coriaceo semini non adhærente. Semen inversum, oblique pyriforme, rostellatum, testa tenuiter membranacea; embryo crassiusculus, hippocrepice incurvus, albus, albumen parcum cingens, cotyledonibus plano-convexis radicula valida acuta oblique ascendente brevioribus.—Fruticulus humilis, rigidus, ramosus, sericeo-pilosus. Folia parva, opposita, crassiuscula. Flores axillares, sessiles, paribus horizontaliter divaricatis, perianthio fructifero pro ordine magno, basi inferne gibbo, ore contracto.

Species 1, Australiæ occidentalis incola. *Moq. in DC. Prod.* xiii. ii. 124. *Benth. Fl. Austral.* v. 193.

33. **Enchylæna**, *R. Br. Prod.* 407.—Flores hermaphroditi, axillares, bracteolis minutis v. 0. Perianthium orbiculare, depressum, carnosulum v. crasse coriaceum, inappendiculatum, 5-lobum, lobis brevibus obtusis inflexis, fructiferis immutatis v. auctis v. dorso paullo incrassatis. Stamina 5, hypogyna, filamentis brevibus compressis; antheræ late oblongæ, vix exsertæ. Discus 0. Ovarium late ovoideum v. depressum; stigmata 2–3, breviuscula, undique papillosa, basi vix connata; ovulum subsessile. Utriculus perianthio carnosulo inclusus, orbicularis, valde depressus, pericarpio membranaceo semini non adhærente. Semen horizontale, orbiculare, vix rostellatum, testa membranacea; embryo annularis, viridis, albumen parcum testæ adhærens cingens, cotyledonibus obtusis, radicula gracili centrifuga.—Frutices v. suffrutices, erecti v. prostrati, glabri v. sericeo-pilosi, ramulis gracilibus. Folia alterna, sessilia, linearia v. lineari-lanceolata, integerrima. Flores parvi, sessiles, solitarii.

Species 4, Australienses. *Benth. Fl. Austral.* v. 180. Perianthium fructiferum superne et inferne convexum nisi in *E. marginata*, ubi superne planum marginatum basi brevissime turbinatum alte 8-costatum ut in *Kochia brachyptera*. *E.? micrantha*, Benth., perianthio globoso tomentoso, est potius *Chenoleæ* species.

34. **Babbagia**, *F. Muell. Rep. Babb. Exped.* 21.—Flores hermaphroditi, minimi, axillares, ebracteolati, stipitati, stipite cavo cum perianthio articulato. Perianthium compressum; tubus subcampanulatus, venosus, demum nuceus costatus et inæqualiter longitrorsum 3-alatus, alis lateralibus obliquis, antica multo minore; limbus inconspicuus, tubulosus, hyalinus, obtuse 4-lobus, lobis ciliatis demum evanidis. Stamina 4, hypogyna, filamentis compressis linearibus; antheræ late oblongæ, exsertæ. Discus 0. Ovarium late ovoideum, in stylum brevem tomentosum attenuatum; stigmata 2, subulata, undique papillosa; ovulum ab apice funiculi suspensum. Utriculus perianthio indurato fere clauso inæqualiter 3-alato inclusus, depresso-pyriformis, longe rostellatus, rostello intra basin cavam alæ majoris ascendente, pericarpio membranaceo inferne basi perianthii adhærente vertice plano crassiusculo a semine libero. Semen horizontale, oblique pyriforme, rostellatum, testa tenuiter coriacea; embryo albus, uncinatim hippocrepicus, albumen parcum cingens, cotyledonibus plano-convexis radicula gracili centrifuga porrecta acuta brevioribus.—Herba humilis, diffuse ramosa, glauca, glabra, axillis foliorum pubescentibus. Folia parva, alterna, sessilia, lineari-oblonga, obovata v. clavata, obtusa, integerrima, carnosa. Flores valde inconspicui, virides; perianthium fructiferum pro planta magnum.

Species 1 v. 2, Australiæ interioris incolæ. *Benth. Fl. Austral.* v. 192 *et in Hook. Ic. Pl. t.* 1078.

35. **Sclerolæna**, *R. Br. Prod.* 410.—Flores hermaphroditi, axillares, liberi v. connati, ebracteolati, lanati v. pilosi. Perianthii tubus subglobosus, coriaceus, apicem versus incrassatus, v. 1–2-spinosus, fructifer inordinate incrassatus, nuceus v. lignosus; limbus minutus, breviter tubulosus, membranaceus, 4-fidus. Stamina 5, hypogyna, filamentis compressis; antheræ late oblongæ, exsertæ. Discus 0. Ovarium oblique ovoideum, hirsutum, in stylum tomentosum attenuatum, stigmatibus 2 crassiusculis subulatis basi v. altius connatis undique papillosis; ovulum ab apice funiculi elongati suspensum. Utriculus perianthio armato rarius inermi indurato inclusus, depresso-pyriformis, obliquus, rostellatus, pericarpio membranaceo semini non adhærente inferne perianthio adnato superne incrassato libero. Semen horizontale, depresso-

pyriforme, longe rostellatum, testa tenuiter coriacea; embryo viridis v. albus, subspiraliter hippocrepicus v. annularis, albumen copiosum uno latere cingens, cotyledonibus linearibus plano-convexis v. exteriore inferiorem fovente, radicula centrifuga elongata acuta apice ascendente.—Fruticuli humiles, rigidi, erecti v. decumbentes, tomentosi lanati v. sericeo-pilosi. Folia alterna, sessilia, linearia v. lanceolata, integerrima. Flores parvi, perianthio fructifero magno.

Species 6, Australienses. *Benth. Fl. Austral.* v. 193, *et in Hook. Ic. Pl. t.* 1076.

KENTROPSIS, *Moq. Chenop. Enum.* 83 *et in DC. Prod.* xiii. ii. 137 includit *S. diacantham*, Benth., et *S. bicornem*, Lindl., characteribus nullis genericis distinguendas.

DISSOCARPUS, *F. Muell. in Trans. Phil. Inst. Vict.* ii. 75, est *S. biflora*, Br.

36. **Anisacantha,** *R. Br. Prod.* 410.—Flores minuti, hermaphroditi, axillares, ebracteolati. Perianthii tubus globosus v. prismaticus, fructifer accrescens, nuceus, costatus v. angulatus, spinis 2–7 elongatis divaricatis armatus; limbus brevis, tubulosus, membranaceus, 4-dentatus, post anthesin immutatus, induratus. Stamina 4, hypogyna, filamentis elongatis compressis; antheræ late oblongæ, exsertæ. Discus 0. Ovarium ovoideum, glabrum v. tomentosum, in stylum elongatum attenuatum; stigmata 2, subulata, undique papillosa; ovulum ab apice funiculi suspensum. Utriculus perianthio nuceo apice inter spinas perforato inclusus, oblique ovoideus, pericarpio membranaceo semini non adhærente, inferne perianthio adnato superne libero. Semen inversum, suborbiculare, compressum, non rostellatum, testa tenuiter coriacea; embryo albus, fere annularis, albumen parcum cingens, cotyledonibus linearibus plano-convexis, radicula ascendente.—Fruticuli humiles, rigidi, glabri pubescentes v. villosi, perianthiis spinosis horridi. Folia alterna, sessilia, linearia, integerrima. Flores solitarii, sessiles; perianthium fructiferum sæpius cauli et interdum folii basi oblique arcte adnatum v. secus caulem decurrens.

Species 6, Australienses. *Benth. Fl. Austral.* v. 198.

37. **Threlkeldia,** *R. Br. Prod.* i. 409.—Flores hermaphroditi et fœminei, axillares, ebracteolati. Perianthii tubus ovoideus globosus v. subcylindraceus, æqualis v. gibbus, fructifer accrescens, nuceus, drupaceus v. crasse coriaceus, inermis v. apicem versus breviter spinosus, spinis erectis; limbus breviter tubulosus, membranaceus, breviter 4–5-lobus, fructifer immutatus. Stamina 5 v. pauciora, hypogyna, filamentis compressis; antheræ late oblongæ, exsertæ. Discus 0. Ovarium late ovoideum, in stylum validum attenuatum, stigmatibus 2–3 subulatis; ovulum funiculo brevi v. ab apice funiculi elongati suspensum. Utriculus perianthio clauso apice perforato inclusus, pericarpio membranaceo semini non adhærente. Semen inversum horizontale v. obliquum, interdum rostellatum, testa tenuiter coriacea; embryo hippocrepicus v. annularis, albumen cingens, cotyledonibus linearibus, radicula elongata ascendente v. laterali.—Fruticuli humifusi v. decumbentes, glabri v. rarius scaberuli. Folia alterna, sessilia, linearia oblonga v. obovata, acuta v. obtusa, integerrima, carnosula. Flores minuti; perianthium fructiferum parvum v. magnum, basi contractum, interdum cauli adnatum.

Species 3, Australiæ incolæ. *Benth. Fl. Austral.* v. 196, *excl. sp. n.* 4.

OSTEOCARPUM, *F. Muell.* 2 *Gen. Rep.* 15, *et in Trans. Phil. Inst. Vict.* iii. 77; *Lithogr. Pl. Vict. t.* 79, *ined.* a congeneribus differt perianthio fructifero turbinato gibbo, rostello seminis intra gibbum ascendente uti in *Babbagia* intra alam producitur.

38. **Cypselocarpus,** *F. Muell. Fragm.* viii. 36.—Flores unisexuales, axillares, ebracteolati; ♂ ignoti. Fl. ♀: Perianthium minutum, membranaceum, fere unilaterale, inæqualiter profunde 3-lobum, lobis semiovatis, fructiferum inordinate accrescens, crasse nuceum, cylindraceum, breviter stipitatum, medio constrictum, basi et apice oblique truncatum, intus 2-locellatum, locellis superpositis, superiore apice aperto marginibus inflexis vacuo, inferiore fructifero, septo indurato medio pervio. Ovarium ovoideo-cylindraceum; stigma prope apicem fere laterale, sessile, depressum, papillosum. Utriculus locello inferiore perianthii accrescentis inclusus, subpyriformi-obovoideus, pericarpio

spongioso semini non adhærente. Semen erectum, oblique pyriforme, compressum, basi rostellatum, testa coriacea pallida fusca rugulosa; embryo crassus, hippocrepicus, albumen farinaceum parcum cingens, cotyledonibus plano-convexis radicula infera brevioribus.—Suffrutex procumbens, scaberulus, ramis elongatis gracilibus ut videtur prostratis apicibus ascendentibus. Folia parva, secus ramulos sparsa, lineari-lanceolata, plana, integerrima. Flores solitarii rarissime 2-ni, breviter pedicellati; perianthia fructifera pro ordine magna, horizontaliter patentia, lobis bracteolæformibus.

Species 1, Australiæ occidentalis incola, *Threlkeldia haloragoides*, F. Muell.; Benth. Fl. Austral. v. 198. Genus certe valde anomalum, *Phytolacceis* ab auctore relatum, sed nostro sensu certissime *Chenopodiacea* et *Threlkeldiæ* multis notis affine. Specimina nostra omnia fructifera tantum, florum characteres e descriptione Muelleri excerpsimus.

Tribus VII. Salicornieæ.

39. **Kalidium,** *Moq. in DC. Prod.* xiii. ii. 146.—Flores hermaphroditi v. unisexuales, in cavis rhacheos clavatæ inarticulatæ immersi, connati et parietibus cavorum adnati. Perianthium naviculare, a latere subcompressum, vertice planiusculo margine alæformi cincto, ore 5-dentato, fructiferum spongiosum. Stamina 2, anticum et posticum, filamentis brevissimis; antheræ oblongæ. Ovarium ovoideum, apice attenuatum; stigmata 2, subulata; ovulum subsessile. Utriculus perianthio breviter alato inclusus et basi adhærens, ovoideus, compressus, pericarpio membranaceo semini non adhærente. Semen erectum, reniforme v. orbiculare, compressum, testa coriacea ad situm embryonis papillosa, albumine copioso carnoso; embryo virgulæformis, cotyledonibus superis antrorsum spectantibus, radicula subhorizontali infera.—Frutices et fruticuli erecti, ramosi, carnosi, ramis erecto-patentibus v. divaricatis, ramulis alternis articulatis. Folia sparsa, inter se libera, decurrentia, elongata subcylindracea v. rudimentaria. Spicæ alternæ, breves v. elongatæ, sessiles v. pedicellatæ, rhacheos cavis spiraliter dispositis septatis.

Species 4, Rossiæ australis et Asiæ centralis incolæ. *Ung. Sternb. in Atti Bot. Cong. Firenz.* 1874, 316, *et* 273, *f.* 12. *Gærtn. Fruct. t.* 127, *f.* 8 (*Salicornia strobilacea*). *Delile, Fl. Eg. t.* 3. *Pall. Ill. Pl. t.* 5, 6 (*Salicornia*).

40. **Halostachys,** *C. A. Mey. in Bull. Soc. Imp. Nat. Mosc.* 1838, 361, *nomen tantum.*—Flores hermaphroditi, in axillis squamarum strobili 3-ni, liberi. Perianthium obpyramidatum, 4-gonum, vertice dilatato convexo 3-lobo, lobis inflexis, fructiferum spongiosum, immutatum. Stamen 1, anticum; anthera late oblonga. Ovarium ovoideum, compressum, apice attenuatum; stigmata 2, rarius 3, brevia, papillosa; ovulum ab apice funiculi elongati suspensum. Utriculus ovoideus, membranaceus. Semen inversum, pyriforme, testa tenuiter coriacea lævi, hilo laterali, albumine copioso carnoso; embryo virgulæformis, dorsalis, cotyledonibus brevibus, radicula supera.—Frutex quasi aphyllus, erectus, robustus, ramosissimus, articulatus, ramis erectis patentibus, articulis elongatis apice dilatatis. Strobili oppositi, pedicellati, cylindracei; bracteæ inter se liberæ, peltatæ, subcordatæ, deciduæ.

Species 1, Rossiæ austro-occidentalis et Asiæ mediæ incola. *Ung. Sternb. in Atti Cong. Bot. Firenz.* 1874, 333 et 273, *f.* 15. *Walp. Ann.* v. 733. *Fenzl in Ledeb. Fl. Ross.* iii. 772 (*Halocnemum*). *Moq. in DC. Prod.* xiii. ii. 150 *et* 148 (*Arthrocnemum caspicum* et *Halostachys caspia*). *Pall. Ill. t.* 4 (*Salicornia*).

41. **Spirostachys,** *S. Wats. in Proc. Amer. Acad.* ix. 125 (*non Ung. Sternb.*).—Flores hermaphroditi, in axillis squamarum strobili 3–5-ni, inter se liberi. Perianthium obpyramidatum, sursum angulatum, truncatum, ore 4–5-lobo v. crenato, fructiferum immutatum. Stamina 1–2, filamentis exsertis; antheræ late oblongæ v. orbiculares. Ovarium lagenæforme, compressum, apice attenuatum; stigmata 2, breviuscula, undique papillosa; ovulum subsessile. Utriculus ovoideus, compressus, pericarpio membranaceo reticulato semini non adhærente. Semen erectum, obovoideum, compressum, testa subcoriacea, hilo basilari, albumine copioso carnoso; embryo dorsalis, virgulæformis, cotyledonibus

brevibus superis, radicula infera.—Frutices quasi aphylli, glabri, erecti, carnosi, ramosi, caule lignoso, ramis alternis articulatis, articulis apice dilatatis sub-2-labiatis. Strobili alterni, sessiles, cylindracei; bracteæ spiraliter dispositæ, peltatæ, persistentes v. tarde deciduæ.

Species 3, quarum una (*S. occidentalis*, S. Wats. l. c. et Bot. Calif. ii. 57, ined.) Americæ boreali-occidentalis incola; duæ Americæ australis temperatæ indigenæ: *S. patagonica* (*Halopeplis? patagonica*, Ung. Sternb.; *Halostachys patagonica*, Moq. in DC. Prod. xiii. ii. 148) et *S. vaginata*, Griseb. Pl. Lorentz. 37.

Genus habitu et perianthio *Halocnemonis*, sed strobili alterni, semen erectum et radicula infera.

42. **Heterostachys**, *Ung. Sternb. in Atti Congr. Bot. Firenz.* 1874, 331 *et* 273, *f.* 3. (Spirostachys, *ejusd. Vers. Syst. Salic.* 100.)—Flores hermaphroditi, in axillis squamarum strobili solitarii, liberi. Perianthium late orbiculatum, membranaceum, complanatum, utrinque late alatum, apice obscure 4-fidum, lobis 2 lateralibus longioribus fornicatis, antico et postico interioribus brevibus planiusculis rotundatis. Stamina 2, lateralia, filamentis compressis?; antheræ ovoideæ?. Ovarium elongato-ovoideum, a dorso compressum, apice attenuatum; stigmata 2, papillosa; ovulum ab apice funiculi elongati suspensum. Utriculus oblongo-ovoideus, compressus, membranaceus, longitrorsum fissilis. Semen inversum, ellipsoideum, compressum, testa ad embryonis situm papillosa, albumine copioso carnoso; embryo dorsalis, hemicyclicus, cotyledonibus . . . ., radicula ascendente. — Frutex carnosulus, erectus, ramosissimus, ramis subopppositis strictis articulatis. Folia opposita et subopposita, inter se libera, sæpissime in ramulos abbreviatos densissime imbricata, suborbicularia, obtusa. Strobili plerumque oppositi, inferiores pedicellati, superiores sessiles, oblongo-cylindracei, turgidi; bracteæ multiseriatæ, liberæ, latiores quam longæ, membranaceæ, apicibus coriaceis, ab axi brevi gracili solutæ.

Species 1, reipublicæ Argentinæ ad Mendozam incola, et suadente Moq. in DC. Prod. xiii. ii. 148 (*Halostachys Ritteriana*) Hispaniolam habitans. Nomen genericum *Spirostachys* ab auctore ipso in *Heterostachys* mutatum ob bracteas strobilorum 'certe oppositas,' sed si nos non fallimus bracteæ spiraliter dispositæ.

43. **Halopeplis**, *Bunge in Linnæa*, xxviii. 573, *nomen tantum*; *Ung. Sternb. Vers. Syst. Salicorn.* 102, *et in Atti Congr. Bot. Firenz.* 1874, 322 *et* 273 *f.* 14 *et* 327 *f.* 22.—Flores hermaphroditi, in axillis squamarum strobili 3-ni, connati et parietibus areæ florigeræ adnati. Perianthium 4-gonum, compressum, vertice latiusculo 3-dentato. Stamina 1–2, filamentis brevissimis; antheræ oblongæ. Ovarium pyriforme, subcompressum; stigmata 2; ovulum ab apice funiculi suspensum. Utriculus obovoideus, compressus, apice attenuatus, membranaceus. Semen minutum, inversum, subreniforme, compressum, testa coriacea lævi v. papillosa, albumine copioso; embryo dorsalis, virgulæformis, cotyledonibus superis radicula ascendente brevioribus.—Herbæ annuæ v. perennes, pusillæ, ramosæ, ramis nodosis. Folia opposita v. superiora sparsa, brevissima, carnosa, subglobosa v. ovoidea. Strobili alterni, ovoidei v. breviter oblongi, obtusi, erecto-patentes; bracteæ spiraliter dispositæ, suborbiculatæ, persistentes.

Species 3, regionum Mediterraneæ, Caspicæ, et Asiæ centralis incolæ. *Moq. in DC. Prod.* xiii. ii. 148 (*Halostachys perfoliata*, *H. songarica*, *et H. patagonica*). *Guss. Fl. Sic. t.* i. (*Salicornia*).—*Halopeplis? patagonica*, Ung. Stern., est *Spirostachyos* species.

44. **Halocnemon**, *Bieb. Fl. Taur. Cauc.* iii. 3.—Flores hermaphroditi, in axillis squamarum strobili 2–3-ni, liberi. Perianthium obpyramidatum, 3-gonum, 3-partitum, subcompressum, vertice convexiusculo, segmentis apice inflexis inappendiculatis. Stamen 1, anticum, filamento compresso; anthera oblonga. Ovarium ovoideum, compressum, apice attenuato; stigmata 2–3, subulata, undique papillosa; ovulum ab apice funiculi suspensum. Utriculus compressus, membranaceus. Semen inversum, pyriforme v. subtrigono-rotundatum, leviter compressum, testa membranacea ad embryonis situm granulata fusca, hilo fere apicali, albumine copioso farinoso; embryo dorsalis, virgulæformis,

cotyledonibus brevibus, radicula supera.—Frutex humilis, carnosus, quasi aphyllus, ramis ascendentibus, ramulis articulatis axillaribus abbreviatis gemmescentibus, articulis brevissimis apice dilatatis sub 2-labiatis. Strobili sessiles, laterales et terminales, breves v. elongati; bracteæ oppositæ, liberæ, semi-orbiculatæ, deciduæ.

Species 1, regionis Mediterraneæ mediæ et orientalis, Rossiæ australis, et Asiæ centralis incola. *Moq. in DC. Prod.* xiii. ii. 149, *sp. n.* 1. *Ung. Sternb. in Atti Congr. Bot. Firenz.* 1874, 336 *et* 278, f. 15. *H. australasicum, Moq. l. c.*, est *Salicornia quinqueflora*, Bunge.

45. **Tecticornia,** *Hook. f. gen. nov.*—Flores hermaphroditi, in axillis squamarum strobili 2–∞-ni, liberi v. cohærentes. Perianthium tubulosum, flaccidissimum, ore lacero. Stamen 1, filamento complanato; anthera lineari-oblonga, profunde 2-loba, exserta. Ovarium ovoideo-lanceolatum, compressum, in stylum elongatum subulatum flaccidum apice 2-fidum attenuatum, stigmatibus terminalibus; ovulum subsessile. Utriculus ovoideus, pericarpio tenuissime hyalino. Semen erectum, ovoideo-oblongum, valde compressum, testa tenuiter coriacea pallide brunnea papillosa albumini duro et cotyledonibus arcte adhærente; embryo dorsalis, gracilis, semi-annularis, cotyledonibus superioribus, radicula infera.—Herba quasi aphylla, molliter succulenta, erecta v. procumbens, glauca, exsiccata pruinosa, caule ramisque articulatis, ramis erectis oppositis et alternis, articulis apice modice dilatatis sub-2-lobis. Strobili terminales, solitarii v. 2–3-ni, oblongo-cylindracei, obtusi; squamæ multiseriatæ, horizontales, dense imbricatæ, latiores quam longæ, succulentæ. Flores minuti, rhachi secus faciem inferiorem squamarum immersi.

Species 1, Australiæ tropicæ orientalis incola. *Benth. Fl. Austral.* v. 203 (*Salicornia cinerea*, F. Muell.). Analysis florum ob mollitiem organorum difficillima.

46. **Pachycornia,** *Hook. f. gen. nov.*—Flores in cavis articulorum superpositorum rhacheos 3-ni, collaterales, laterales ♂, intermedii hermaphroditi, basibus connatis et axi rhacheos adnatis. Perianthium a dorso complanatum, membranaceum, truncatum, lateribus anguste alatis, ore contracto obtuse 4-dentato, dentibus lateralibus majoribus. Stamen 1, filamento crassiusculo complanato rigido apice attenuato; anthera lineari-oblonga. Ovarium ovoideum, axi rhacheos immersum et adnatum; stylus lanceolato-subulatus, compressissimus, stigmatibus 2 elongatis undique papillosis; ovulum ab apice funiculi suspensum. Utriculus axi rhacheos inordinate aucti lignosi immersus, pericarpio axi arcte adhærente. Semina inversa, quasi in loculis axeos recondita, globoso-reniformia, testa tenuiter coriacea lævi pallide brunnea, albumine copioso farinoso; embryo annularis, gracilis, cotyledonibus et radicula sursum incurvis.—Fruticulus erectus, quasi aphyllus, crassus, carnosus, caule ramisque articulatis, articulis apice in lobos 2 triangulares patentes subacutos dilatatis. Spicæ breves, crassæ, articulis paucis latissime triangularibus subacutis patulis. Flores in basibus articulorum reconditi.

Species 1, Australiæ temperatæ incola. *Benth. Fl. Austral.* v. 202 (*Salicornia robusta*, F. Muell. *Lith. Pl. Vict. ined.*). Planta singularis, ab *Arthrocnemo* perianthio complanato membranaceo, seminibus axi lignoso strobili sepultis, et embryone annulari distinctum. Flores certe ut a Benthamio descripti 3-ni, monandri, nec ut in icone Muelleriana delineati solitarii et triandri.

47. **Arthrocnemum,** *Moq. Enum. Chenop.* 111 *et in DC. Prod.* xiii. ii. 150, *excl. sp. plurim.*—Flores hermaphroditi, in cavis articulorum superpositorum immersi, non aut vix connati. Perianthium ovoideum v. angulatum, vertice obtuso attenuato v. subacuto 3–4-fido, lobis 2 lateralibus elongatis subacutis sæpius fornicatis, postico breviore rotundato, antico dum adsit minore, fructiferum spongiosum v. inflatum. Stamina 2, anticum et posticum, filamentis brevibus; antheræ oblongæ. Ovarium ovoideum, subcompressum, apice attenuato; stigmata 2, subulata; ovulum subsessile. Utriculus perianthio inflato inclusus, ovoideus, pericarpio membranaceo v. indurato. Semen erectum, ovoideum, testa crustacea lævi v. papillosa, albumine carnoso; embryo dorsalis, semi-annularis, cotyledonibus ascendentibus, radicula infera.—Frutices ramosi, quasi aphylli, erecti v. basi decumbentes, glabri, ramis articulatis, articulis apice in

vaginam dilatatis. Spicæ terminales et laterales, sessiles, subcylindraceæ v. obtusæ, 4-gonæ; areæ floriferæ decussatim oppositæ.

Species ad 7, littorum salsorum Asiæ, Africæ et Australasiæ incolæ, quarum una etiam in America boreali-occidentale indigena. *Ung. Sternb. in Atti Bot. Congr. Firenz.* 1874, 281, 272 *f.* 9, *et* 286 *f.* A, B, C. *Bunge in Boiss. Fl. Or.* iv. 932. SALICORNIÆ species, *Guss Fl. Sic. t.* 4. *Pall. Ill. Pl. t.* 7. *Wight, Ic. t.* 737.

A. bidens, Nees, *A. halocnemoides*, Nees, *A. arbuscula*, Moq. (*Salicorniæ* species, Benth. Fl. Austral. v. 203), aliæque Australienses ulterius examinandæ. Genera Salicornoidea ex speciminibus exsiccatis difficillime determinanda.

48. **Salicornia,** *Linn. Gen. n.* 10.—Flores hermaphroditi v. polygami, in cavis articulorum superpositorum immersi, 3-7-ni, liberi v. connati et basi areæ floriferæ adnati. Perianthium obpyramidatum, carnosum, vertice planiusculo rarius contracto, ore 3–4-denticulato, fructiferum spongiosum. Stamina 2, rarius 1, filamento teretiusculo; antheræ exsertæ, didymæ. Ovarium ovoideum, apice attenuatum; stylus apice lacerus v. stigmatibus 2 subulatis undique papillosis terminatus; ovulum subsessile. Utriculus perianthio spongioso inclusus, ovoideus v. oblongus, rhachi plus minusve immersus, pericarpio membranaceo. Semen erectum, oblongum v. subellipsoideum, compressum, testa tenuiter coriacea pilis uncinatis hispidula castanea, albumine 0; embryo conduplicatus, cotyledonibus crassiusculis obtusis superis radiculæ horizontali inferæ parallelis.—Herbæ quasi aphyllæ annuæ v. fruticuli carnosi, erecti v. decumbentes, glabri, ramis oppositis articulatis, articulis apice in vaginam dilatatis. Spicæ terminales, breves v. elongatæ, cylindraceæ, floribus collateralibus v. intermedio altius inserto; areæ floriferæ decussatim oppositæ, in loculos tot quot flores divisæ.

Species ad 8, littoribus salsis utriusque orbis indigenæ. *Ung. Sternb. in Atti Bot. Congr. Firenz.* 1874, 291, 272 *f* 10, 11, *et* 278 *f.* 17 *ad* 20. *Nees, Gen. Fl. Germ. Monochl. n.* 68, *f.* 1 *ad* 20. *Fl. Dan. t.* 303, 1621. *Guss. Fl. Sic. t.* 3. *Pall. Ill. Pl. t.* 1 *ad* 3. *Wight, Ic. t.* 738. *Fenzl in Mart. Fl. Bras.* v. i. *t.* 49.

49 **Microcnemum,** *Ung. Sternb. in Atti Bot. Congr. Firenz.* 1874, 280 *et* 272 *f.* 8.—Flores hermaphroditi, in axillis articulorum superpositorum dispositi, liberi. Perianthium 0. Stamen 1. Ovarii stylus elongatus; ovuli funiculus brevis. Utriculus membranaceus. Semen oblique reniforme, testa crustacea nigra granulata, hilo antico, albumine sat copioso; embryo virgulæformis, flexus, cotyledonibus postice ascendentibus, radicula infera.—Herba habitu *Salicorniæ*, annua, pusilla, ramosissima, glauca, ramis teretibus omnibus articulatis in spicas consimiles graciles elongatas abeuntibus; articuli ramorum longiusculi, spicarum breves, in vaginas obscure 2-lobas floriferas membranaceo-marginatas dilatati. Semina minuta, aterrima.

Species 1, Arragoniæ incola. Characteres e descriptione Unger-Sternbergii, et frustulo fructifero a cl. Boissier benevole communicato confecti. Flores fide auctoris in axillis articulorum 3-ni, sed semina numerosa in singulis axillis invenimus.

TRIBUS VIII. SUÆDEÆ.

50. **Suæda,** *Forsk. Fl. Æg. Arab.* 69, *t.* 18 B. (Cochliospermum, *Lag. Mem. Pl. Barill.* 58, *ex Moq.*)—Flores hermaphroditi v. abortu unisexuales, minuti, bracteati et 2-bracteolati. Perianthium globosum turbinatum v. urceolatum, 5-lobum v. 5-partitum, crassiusculum v. demum carnosulum, lobis segmentisve æqualibus et inappendiculatis v. 1–2 ceteris majoribus inflatis v. corniculatis, rarius omnibus dorso breviter transverse alatis. Stamina 5, subhypogyna v. perigyna, filamentis brevibus; antheræ majusculæ. Discus elevatus v. 0. Ovarium basi sæpius lata sessile v. tubo perianthii adnatum, ovoideum orbiculare v. sublageniforme, apice rotundato v. truncato; stigmata 2–5, brevia, subulata, recurva, undique papillosa; ovulum subsessile. Utriculus perianthio inclusus, orbicularis ovoideus v. lageniformis, teres compressus v. depressus, membranaceus v.

subspongiosus, pericarpio semini rarissime adhærente. Semen horizontale, obliquum v. erectum, orbiculare oblique pyriforme v. subreniforme, turgidum v. compressum, hilo emarginato, testa crustacea lævi, integumento interiore membranaceo, albumine 0 v. parco in massulas 2 diviso; embryo gracilis, plano-spiralis, sæpissime viridis, radicula ascendente descendente v. laterali.—Herbæ v. frutices salsi, erecti v. prostrati, simplices v. diffuse ramosi, virides v. glauci, rarius subfarinosi, rarissime puberuli. Folia terna, carnosa, teretia vermicularia v. semiteretia, rarius spathulata v. planiuscula, integerrima. Flores parvi v. minuti, axillares, sessiles v. subsessiles, solitarii v. glomerati, glomerulis interdum folii basi adnatis. Semina fide Bungei in speciebus compluribus dimorpha, alia præcocia testa crustacea, alia rariora serotina testa membranacea.

Species ad 40, in littoribus et in desertis salsis obviæ. *Boiss. Fl. Or.* iv. 937. *S. Wats. in Proc. Amer. Acad.* ix. 87. *Bot. Calif.* ii. 58, *ined.*

Genera sequentia a variis auctoribus distincta, characteribus inter se minime validis definita, pleraque jam a Bungeo in Boiss. l. c. in unum juncta sunt, cætera nostro sensu æquo jure rejicienda.

SUÆDA, *Moq. in DC. Prod.* xiii. ii. 155, *et in Ann. Sc. Nat. ser.* 1, xxiii. *t.* 19, 20, 21 A, 22 A. Perianthium 5-partitum v. 5-fidum, segmentis lobisve æqualibus inappendiculatis fructiferis immutatis. Ovarium basi lata sessile v. perianthii tubo adnatum. Semen sæpius erectum. *Pall. Ill. Pl. t.* 42. *Wight, Ic. t.* 1792, 1796. Perianthium in *S. monoica*, *S. vermiculata*, aliisque certe tantummodo 5-lobum ovario basi tubo adnato ut in *Schanginia*.

BELOVIA, *Moq. in DC. Prod.* xiii. ii. 168, est fide Bungei in Boiss. Fl. Or. iv. 942, forma heterocarpa *S. setigeræ*, Moq.

SEVADA, *Moq. in DC. Prod.* xiii. ii. 154, cujus fructus ignotus est, charactere nullo dato a *Suæda* distinguere possumus.

SCHOBERIA, *C. A. Mey. in Ledeb. Fl. Alt.* i. 395, *Ic. Fl. Ross. t.* 44, 45, *excl. S. corniculata* (CHENOPODINA, *Moq. in DC. Prod.* xiii. ii. 159). Perianthium 5-partitum v. 5-lobum, segmentis lobisve subæqualibus post anthesin immutatis. Ovarium sæpissime basi contractum, Semen sæpissime horizontale. *Nees, Gen. Fl. Germ. Monochl. n.* 62. *Fl. Dan. t.* 489 (*Chenopodium*). *Pall. Ill. Pl. t.* 39, 43, 44, 47 (*Suæda*). *Wight, Ic. t.* 1793 (*Chenopodium*). SCHOBERIA, *Moq. in Ann. Sc. Nat. ser.* 1, xxiii. 321, *t.* 22, *et in DC. Prod.* xiii. ii. 165, perianthii segmentis dorso corniculatis v. appendiculatis includit *S. corniculatam*, C. A. Mey.; Ledeb. Ic. Fl. Ross, t. 195, et *S. calceoliformem*, Moq. l. c. 166.

BRENIA, *Moq. in DC. Prod.* xiii. ii. 167. Perianthium depressum, profunde 5-lobum, demum auctum, lobis dorso transversim alatis. Ovarium basi contractum. Semen horizontale. Herba annua Asiæ centralis.

CALVELIA, *Moq. in DC. Prod.* xiii. ii. 167. Perianthium urceolatum, 5-lobum, demum auctum, lobis longitudinaliter alatis. Semen horizontale. Herba annua, Altaica, a nobis non visa.

SCHANGINIA, *C. A. Mey. in Ledeb. Fl. Alt.* i. 394. Perianthium urceolatum v. turbinatum, 5-lobum, demum sæpe inflatum, lobis fructiferis immutatis v. dorso tuberculo auctis. Ovarium basi tubo perianthii adnatum v. eo immersum. Semen erectum. *Moq. in DC. Prod.* xiii. ii. 153 *et in Ann. Sc. Nat. ser.* 1, xxiii. *t.* 21 B. *Boiss. Fl. Or.* iv. 944. *Pall. Ill. Pl. t.* 40, 41 (*Suæda*). Species 3 v. 4, quarum typica, *S. linifolia*, C. A. Mey., forma perianthii, ovarii insertione, et semine a *S. vermiculata* aliisque non differt. Semen, ex Boiss., pericarpio arcte adhæret. Species Ægyptiacæ et Arabicæ ab Asiaticis differunt habitu floribusque multo majoribus.

51. **Alexandra,** *Bunge in Linnæa*, xvii. 120. (Pterocalyx, *Schrenk in Bull. Phys. Math. Acad. Sc. Petersb.* 1843, i. 361.)—Flores polygami, spicati, solitarii v. conferti, bracteati et 2-bracteolati, bracteis magnis imbricatis flores velantibus, bracteolis minimis subulatis. Perianthium complanatum, orbiculare v. obcordatum, membranaceum, 5-partitum, demum immutatum; segmenta 2 lateralia cymbiformia, dorso et superne late alata, antico et 2 posticis multo minoribus planis obtusis. Stamina 5, filamentis subulatis; antheræ oblongæ, obtusæ. Discus 0. Ovarium ovoideum, in fl. ♂ rudimentarium; stigmata 2–3, filiformia, undique papillosa, ovulum subsessile. Utriculus perianthio inclusus, orbicularis, compressus, pericarpio membranaceo semini non adhærente. Semen erectum, orbiculare, basi rostellatum, testa lævi crustacea brunnea, albumine 0; embryo plano-spiralis, gracilis, viridis, radicula elongata infera.—Herba annua, erecta,

glaberrima, caule simpliciusculo robusto folioso. Folia infima opposita, teretia, carnosa; superiora alterna, sessilia, erecta, ovata v. lanceolata, semiamplexicaulia, obtusa, concava, crasse coriacea, enervia. Flores parvi, bracteis occlusi, laterales in bracteæ axilla sæpe imperfecti.

Species 1, in locis salsuginosis Soongariæ vigens. *Moq. in DC. Prod.* xiii. ii. 168.

52. **Borsczovia,** *Bunge in Act. Hort. Petrop.* v. 643.—Flores abortu monoici, axillares, fasciculati, bracteati et 2-bracteolati. Fl. ♂ parcissimi: Perianthium 5-partitum, segmentis obtusis vix cucullatis. Stamina 5, perigyna; antheræ subglobosæ, didymæ. Ovarii rudimentum liberum, elongato-lageniforme, apice dilatatum; stigmata 2 rudimentaria. Fl. ♀ numerosissimi: Perianthium tenuissimum, ovario adhærens, hyalinum, enerve, integrum ore minuto, v. in segmenta 5 solubile. Ovarium subovoideum, compressum, carnosum, nervosum, vertice introverso; stigmata 2, minuta, subulata, fundo verticis ovarii introversi recondita; ovulum funiculo gracili erectum, micropyle infera. Utriculus perianthio hyalino indutus, orbicularis, compressus, pericarpio carnosulo nervoso, endocarpio membranaceo semini adhærente. Semina dimorpha, orbicularia, compressa, erecta, basi rostellata, funiculo crassiusculo, alia majora valde compressa testa tenuiter coriacea, alia minora turgida testa crustacea lævi, integumento interiore carnosulo, albumine parco gelatinoso; embryo plano-spiralis, cotyledonibus elongatis, radicula infera.—Herba annua, glaberrima, a basi ramosa, ramis albescentibus fragilibus, inferioribus oppositis. Folia alterna, sessilia, inferiora crassa semi-teretia, superiora elliptico-oblonga marginibus hyalinis. Flores 3–5-ni, sessiles, minuti; fructibus pro tribu magnis.

Species 1, deserti Aralensis incola. Flores ♂ a nobis non visi; ♀ heteromorphi; semina minorum ex Bungeo obovoidea, tumida, margine acuto, integumento crustaceo embryoneque flavescenti-albo, majorum valde compressa, integumento membranaceo duplici opaco embryoneque viridulo. Nos formas duas vidimus, semina majora plana testa magis coriacea, minora turgida testa potius crustacea, in utroque integumentum duplex et minora margine non acuta. Embryo in utroque idem v. minorum laxius spiralis. Florum ♀ analysis difficillima est, et forte discrimen partium supra datum non semper accuratum, quamplurima tamen perianthia examinavimus exitu semper eadem.

53. **Bienertia,** *Bunge in Boiss. Fl. Or.* iv. 945.—Flores abortu polygami, hermaphroditi cum paucis fœmineis in glomerulos axillares dispositi; fœminei racemosi, glomerulum superantes. Perianthium ovario adnatum, depresso-globosum, 5-lobum, lobis 5 planis conniventibus, fructiferum spongiosum, disciforme, ala horizontali circumdatum, lobis minutis in centro disci verrucæformibus. Stamina 5, perigyna, filamentis subulatis; antheræ . . . Fructus orbicularis, valde depressus, perianthii ala spongiosa circumdatus, et intra tubum arcte arrectus, lobis planis inflexis medio coronatus, pericarpio subcoriaceo semini adhærente. Semen horizontale, orbiculare, testa crustacea granulata, albumine in utroque latere seminis parco carnoso; embryo spiralis, gracilis, radicula centrifuga.—Herba annua, inferne lignescens, e collo ramosa, ramis crassiusculis. Folia sparsa, sessilia, lineari-subteretia, obtusa, sæpe recurva, caduca. Flores minuti, racemosi; racemi in paniculam angustam terminalem ramulis divaricatis 6–10-floris carnosulis dispositi; flores serotini sæpe fatui.

Species 1, Persica. Exemplar mancum a Boissiero benevole missum vidimus. Descriptio pro maxima parte ex Bungeo l. c.

TRIBUS IX. SALSOLEÆ.

54. **Traganum,** *Delile, Fl. Eg.* 60, *t.* 22, *f.* 1.—Flores hermaphroditi, axillares, 2-bracteolati, lana immersi. Perianthium basi tubulosum, 5-lobum, lobis obtusis membranaceis inappendiculatis, fructiferum incrassatum v. induratum, lobis conniventibus immutatis. Stamina 5, disco inconspicuo inserta, filamentis linearibus compressis; antheræ lineari-sagittatæ, acutæ, exsertæ; staminodia 0. Ovarium depresso-globosum, in stylum crassum attenuatum, stigmatibus 2 crasse subulatis; ovulum subsessile. Utriculus peri-

anthio indurato v. nuceo cylindraceo truncato inclusus, depresso-globosus, pericarpio crasse carnoso vertice subindurato semini non adhærente. Semen horizontale, depresso-globosum, testa carnosula, albumine 0; embryo subcochleatim spiralis, gracilis, radicula centrifuga ascendente porrecta.—Fruticulus ramosissimus, cortice albo, caudice crasso lignoso, ramulis herbaceis teretibus v. rigidis ad nodos villosis. Folia alterna, sessilia, teretia, carnosula, obtusa v. mucronata. Flores minuti; bracteolæ foliis consimiles.

Species 2, altera Africæ borealis et Arabiæ incola, altera Canariensis. *Moq. in DC. Prod.* xiii. ii. 171.

55. **Cornulaca,** *Delile, Fl. Eg.* 62, *t.* 22, *f.* 3.—Flores polygami, axillares, solitarii v. fasciculati, lana immersi, 2-bracteolati. Fl. ⚥: Perianthium crasse coriaceum, infra medium turgidum, 5-partitum, demum induratum; segmenta 5, inæqualia, basi coriacea, superne in laminam spathulatam membranaceam dilatata, v. 1–2 exteriora spinescentia. Stamina 5, dorso sub apice disci tubulosi 5-lobi membranacei inserta, filamentis lineari-subulatis; antheræ oblongæ, obtusæ, infra medium 2-fidæ, inappendiculatæ; lobi disci (staminodia) breves, quadrati, apicibus incrassatis. Ovarium ovoideum, compressum, liberum v. disco immersum; stylus crassiusculus, stigmatibus 2 crasse subulatis patenti-recurvis v. revolutis intus papillosis; ovulum subsessile. Utriculus perianthio indurato inclusus, ovoideus, a latere compressus, pericarpio crassiusculo semini non adhærente. Semen horizontale, testa crassiuscule membranacea, albumine 0; embryo cochleato-spiralis, viridis, radicula centrifuga porrecta.—Fruticuli rigidi, lignosi, caule crasso ramisque validis tortuosis inarticulatis. Folia alterna, sessilia, triangularia v. semi-teretia, apice spinulosa. Flores parvi, polymorphi, plerique imperfecti, perianthio (in *C. monacantha*) in lacinias membranaceas fere ad basin fisso.

Species 4–5, Africæ boreali-occidentalis, Arabiæ et Assyriæ incolæ. *Bunge, Anabas. Revis.* 87, *et in Boiss. Fl. Or.* iv. 983. Characterem ad *C. monacantham*, Del., et *C. amblyacantham*, Bunge, confecimus. Semen in priore tantum nobis visum, ubi horizontale embryone cochleari et radicula laterali; in floribus imperfectis discus polymorphus est, elongatus, ovarium et styli basin includens, v. brevis, v. 0, staminibus imperfectis hypogynis. *C. Aucheri*, Moq., est species annua, cujus exemplaria typica non vidimus, et forma ejusdem anomala a Bungeo missa nec flores nec fructus exhibet; genus ideo incertum est. Fructus *C. setiferæ*, Moq., ignotus est. In *C. Ehrenbergii*, Aschers., flores ♂, quos solos vidimus, solitarii, perianthio indurato villoso interdum basi cum bracteolis connato. Folia in speciebus plurimis sparsa, in *C. Ehrenbergii* dense imbricata. Genus *Tragano* valde affine, et verisimiliter cum illo melius jungendum.

Traganum nudatum, Schimp. Pl. Un. Itin. 284 et 737, non Del. (*T. nudatum, var. longisetum*, Pl. Schweinf.), a Bungeo Anabas. Revis. 92, et in Boiss. Fl. Or. iv. 985 ad *Halogeton alopecuroidem*, Fenzl, relatum, a *Cornulaca* differt perianthii segmentis latis hyalinis disco adnatis post anthesin immutatis, est vel *Tragani nudati*, Delile, forma anomala, vel genus novum inter *Traganum* et *Cornulacam* quasi medium. *Salsola alopecuroides*, Delile, Fl. Eg. 56, *t.* 21, *f.* 1. Agathophora, Bunge, Anabas. Revis. 92 (*Halogeton*, sect. *Agathophora*, Fenzl in Ledeb. Fl. Ross. iii. 83 in not.) planta est prorsus ignota, a *Tragano nudato*, Schimp. ut nobis videtur diversa.

56. **Seidlitzia,** *Bunge in Boiss. Fl. Or.* iv. 950.—Flores monoici v. polygami, axillares, sessiles, 2-bracteolati, superiores masculi. Fl. ♂: Perianthium basi truncatum, 5-partitum; segmenta obovata, membranacea, ima basi connata. Stamina 5, disco cupulari inserta, filamentis brevibus; antheræ oblongæ. Ovarii rudimentum disco insertum, oblongum, compressum, stigmatibus 2 suberectis brevibus obtusis. Fl. ♀: Perianthium carnosum, profunde 5-lobum; lobi obtusi, cucullati, dorso tuberculati, tuberculis demum in alas obovatas horizontales membranaceas expansis. Discus annularis. Ovarium depressum, basi perianthii semi-immersum; stylus brevissimus, stigmatibus 2 minutis subulatis; ovulum subsessile. Utriculus perianthio stellatim alato inclusus, depresso-globosus, pericarpio carnosulo semini non adhærente sub-operculatim dehiscente. Semen horizontale, turgidum, testa carnosula lævi, albumine 0; embryo plano-spiralis, gracilis, radicula centrifuga porrecta.—Herba annua, ramosa, glauca, glaberrima, ramis oppositis albidis teretibus. Folia opposita, sessilia, linearia, semiteretia, obtusa, carnosa. Flores

minuti; ♂ solitarii, bracteolis subglobosis carnosis; ♀ sæpius fasciculati, pube brevi immersi, non raro deformes v. steriles ovario incrassato ovoideo carnoso et stigmatibus crassis recurvis; fl. ♀ perianthii segmenta sæpe inæqualia.

Species 1, Armeniæ, Syriæ, et Persiæ incola. *Bieb. Cent. Pl. Ross. t.* 17 (*Anabasis*).

57. **Arthrophytum,** *Schrenk in Bull. Phys. Math. Acad. Sc. Petersb.* iii. 211.—Flores hermaphroditi, axillares, 2-bracteolati. Perianthium globosum, herbaceum, 5-partitum; segmenta orbicularia, conniventia, dorso transverse gibba, marginibus membranaceis, fructiferum immutatum. Stamina 5, margine disci crassi urceolaris villosi inserta, filamentis subulatis compressis; antheræ late ovato-cordatæ, obtusæ; staminodia 0. Ovarium globosum, disco immersum, in stylum brevissimum contractum, stigmate 2-lobo; ovulum subsessile. Utriculus perianthio inclusus, depresso-globosus, pericarpio carnosulo semini non adhærente. Semen horizontale. . . .—Fruticulus humilis, glaber, radice crasso, collo lignoso multicipiti, ramis brevibus erectis strictis teretibus exsiccatis fragilibus. Folia opposita, sessilia, basi per paria connata, patentia, subulata, 3-quetra, pungentia. Flores in axillis oppositis solitarii, minuti; bracteolæ foliis consimiles.

Species 1, Turkestaniæ et Soongariæ incola. *Trautv. in Bull. Soc. Imp. Nat. Mosc.* 1867, 20. *Bunge in Boiss. Fl. Or.* iv. 947. Embryo ignotus ideoque locus in ordine incertus.

58. **Horaninovia,** *Fisch. et Mey. Enum. Pl. Schrenk,* 10.—Flores hermaphroditi v. unisexuales, axillares, 2-bracteolati. Perianthium urceolatum, 4–5-partitum; segmenta late ovata v. oblonga, acuta obtusa v. aristata, hyalina v. basi coriacea, fructifera dorso gibboso-incrassata, et basi suberoso-incrassata. Stamina 5, inter lobos (staminodia) disci 5-lobi cupularis inserta, filamentis subulatis; antheræ late oblongæ, muticæ v. aristatæ. Ovarium basi disci immersum, ampullaceum; stylus brevis, stigmate capitellato; ovulum subsessile. Utriculus basibus incrassatis incurvis segmentorum perianthii inclusus, depresso-ampullaceus, pericarpio membranaceo semini non adhærente. Semen horizontale, depresso-orbiculare, testa membranacea, albumine 0; embryo plano-spiralis, gracilis, radicula oblique centrifuga.—Herbæ parvæ, annuæ, dichotome v. opposite ramosæ, rigidæ, glabræ v. puberulæ. Folia opposita v. alterna, patentia, teretia, rigida, spinescentia v. obtusiuscula, floralibus basi membranaceo-dilatatis. Flores minuti, solitarii v. fasciculati, vaginis foliorum absconditi, sessiles, subpilosi; bracteolæ perianthium æquantes.

Species 2 v. 3, sabulosis Soongariæ et deserti Caspici incolæ. *Moq. in DC. Prod.* xiii. ii. 170. *Eichw. Pl. Casp. Cauc. t.* 12 (*Salsola*).

59. **Haloxylon,** *Bunge, Rel. Lehm.* 468 (292), *et in Boiss. Fl. Or.* iv. 948.—Flores hermaphroditi, axillares, 2-bracteolati. Perianthium chartaceum v. scariosum, 5-partitum; segmenta a basi libera, concava; fructifera accrescentia, dorso ala transversa ampla horizontali nervosa instructa. Stamina 5, v. pauciora, margine disci lobati cupularis inserta, filamentis lineari-subulatis; antheræ ellipsoideæ, obtusæ; staminodia (lobi disci) rotundata v. quadrata. Ovarium subglobosum v. depressum, basi disco immersum, in stylum brevem contractum, stigmate truncato simplici v. 2-lobo, v. stigmatibus 2–4 subulatis recurvis; ovulum subsessile. Utriculus unguibus segmentorum perianthii inclusus, globosus v. depressus, pericarpio carnosulo semini non adhærente. Semen horizontale, depresso-globosum, testa membranacea, albumine 0; embryo viridis, plano-spiralis, radicula centrifuga.—Fruticuli v. arbusculæ glabræ v. axillis villosis, rarius puberulæ, virides v. glaucæ, caudice crasso lignoso multicipiti, ramis cylindraceis ad nodos articulatis. Folia opposita, basi connata, triangularia v. elongata et teretia, obtusa v. mucronata, interdum brevissima. Flores parvuli, secus ramulos spicati, solitarii v. fasciculati.

Species 8 v. 10, pleræque Hispaniæ, Africæ borealis, et Asiæ occidentalis et centralis incolæ, 2 indicæ. *Moq. in DC. Prod.* xiii. ii. 172 (*Caroxyli* species caulibus ramisque articulatis). *Ledeb. Ic. Fl. Ross.* t. 47 (*Anabasis*). *Cav. Ic. t.* 284 (*Salsola*). Species indicæ *H. recurvum*, Hook. f. (*Salsola recurva*, Wall. Cat. Herb. Ind. n. 6934), e Burmah; et *H. Stocksii*, Hook. f. (cum priore a Bungeo in Boiss. l. c. confusa) a cæteris recedunt stylo 0 et stigmate obtuso. *Anabasis ramosissima*, Boiss. (Herb. Syriæ, Gaillardot, n. 2199) est *Haloxyli* species in 'Flora Orientali' prætermissa.

60. **Salsola,** *Linn. Gen. n.* 311.—Flores hermaphroditi, axillares, 2-bracteolati. Perianthium 5- rarius 4-partitum; segmenta oblonga v. lanceolata, concava, medio dorso incrassata, fructifera supra medium ala late horizontali scariosa instructa, inferne libera at immutata v. in thecam nuceam connata, apicibus liberis sæpius inflexis. Stamina 5 v. pauciora, hypogyna v. rarius disco minuto inserta, filamentis subulatis v. linearibus planis; antheræ breves v. elongatæ, obtusæ v. connectivo in acumen producto; staminodia 0. Ovarium globosum depressum v. late ovoideum, in stylum brevem v. elongatum abrupte attenuatum, stigmatibus 2 rarissime 3 subulatis erectis v. recurvis intus papillosis; ovulum subsessile v. funiculo elongato suspensum. Utriculus unguibus segmentorum perianthii inclusus, late ovoideus v. orbicularis, vertice concavo v. convexo, pericarpio carnosulo v. membranaceo semini non adhærente. Semen horizontale, rarissime inversum, erectum v. obliquum, orbiculare, testa membranacea, albumine 0; embryo plano- v. subcochleato-spiralis, sæpius viridis, radicula elongata centrifuga v. in seminibus inversis supera.—Herbæ, frutices et suffrutices, habitu varii, glabri pubescentes v. tomentosi, ramis inarticulatis. Folia alterna v. rarius opposita, sessilia v. basi lata amplexicaulia, brevia v. elongata, interdum squamiformia, apice sæpe pungentia. Flores parvi, solitarii v. fasciculati, perianthio fructifero non raro amplo.

Species ad 40, pleræque Europæ, Africæ borealis et Asiæ temperatæ et tropicæ incolæ, 10 austro-africanæ; una in America temperata tam boreali quam australi, et in Australia indigena. *Moq. in DC. Prod.* xiii. ii. 179 *et* 172 (*Caroxyli* species caulibus inarticulatis). *Bunge in Boiss. Fl. Or.* iv. 951. *Fenzl in Ledeb. Fl. Ross.* iii. 796. *Gærtn. Fruct. t.* 75. *Nees, Gen. Fl. Germ. Monochl. n.* 61. *Fl. Dan. t.* 818. *Cav. Ic. t.* 283, 285 *ad* 288. *Jacq. Hort. Vind. t.* 68; *Fl. Austr. t.* 294. *Sibth. Fl. Græc. t.* 255. *Asso, Syn. Stirp. Aragon. t.* 2. *Webb, Otia Hisp. t.* 5. *Eichw. Pl. Casp. Cauc. t.* 24 *ad* 31. *Jaub. et Spach, Ill. Pl. Or. t.* 137, 138. *Delile, Fl. Æg. t.* 21, *f.* 4. *Pall. Ill. Pl. t.* 12 *ad* 17, 19, 21 *ad* 23, 25, 26, 28 *ad* 30. *Belang. Voy. Ind. Or. t.* 10. *Wight, Ic. t.* 1795.

Caroxylon, *Thunb. Nov. Pl. Gen.* ii. 37, ab auctore ipso in Fl. Cap. ii. 176, ad *Salsolam* reductum est. Caroxylon, *Moq. in DC. l. c.*, constat ex speciebus *Salsolæ* compluribus nullo charactere generice distinguendis, cum paucis ramis articulatis ad *Haloxylon* referendis.

Halothamnus, *Jaub. et Spach, Ill. Pl. Or. t.* 136, est *Salsolæ* species disco parvo cupulari instructa.

61. **Hellcilla,** *Moq. in DC. Prod.* xiii. ii. 169.—Flores hermaphroditi, axillares, 2-bracteolati. Perianthium urceolato-campanulatum, 5-fidum; segmenta carnosa demum baccata, dorso subcorniculato-carinata. Stamina 5, basi perianthii inserta, filamentis lineari-subulatis basi dilatatis in cupulam connatis; antheræ ovato-oblongæ; staminodia 0. Ovarium lageniforme, basi calycis adhærens; stigmata 2, minuta, subulata, divaricata. Utriculus perianthio clauso bacciformi substellatim 5-gono inclusus, depressus, pericarpio membranaceo subcarnoso inferne calyci adnato. Semen horizontale, orbiculare, testa simplici membranacea, albumine 0; embryo cochleatus, viridis, radicula dorsali.—Herba erecta, gracilis, virgata, glabra, ramosa, ramis patulis gracillimis. Folia alterna, in tuberculo minuto sessilia, semiteretia, carnosa, subflexuosa, parum farinosa, superiora angustissima. Flores paniculati, sæpius basi foliorum enati, breviter pedicellati, solitarii v. 2–3-ni, paniculæ ramis alternis filiformibus flexuosis paucifloris; bracteolæ minutæ, scariosæ. (*Char. ex Moq.*).

Species 1, Chinensis, a nobis non visa. 'Facie et characteribus ad *Schoberiam* paululum accedit, sed inflorescentia plane diversa, et semen *Salsolearum*,' *Moq.*

62. **Ofaiston,** *Raf. Fl. Tellur.* 47, *ex Moq. in DC. Prod.* xiii. ii. 203.—Flores hermaphroditi, in sulcis ramulorum axillares, 2-bracteolati. Perianthium 3–5-partitum; segmenta 3 exteriora obovato-spathulata, membranacea, demum rigidula, concava, medio dorso obtuse cornuta v. ala minuta transverse acuta; 2 interiora minora, simplicia v. exterioribus consimilia. Stamina 1 v. 2, disco obscuro inserta, filamentis planis linearibus demum elongatis; antheræ oblongæ, basi longe 2-fidæ, connectivo in appendicem brevem latam obtusam producto; staminodia 0. Ovarium ovoideum, a latere compressum; stigmata 2, a basi distincta, subulata, sub apice cohærentia; ovulum ab apice funiculi suspensum. Utriculus perianthio inclusus, late ovoideus, compressus,

pericarpio tenuiter membranaceo semini non adhærente. Semen erectum, turgide lenticulare, testa membranacea, albumine 0; embryo plano-spiralis, cotyledonibus planis radicula elongata infera latioribus.—Herba glabra, ramosissima, ramis ascendentibus alternis. Folia alterna, semiamplexicaulia, teretia, obtusa, carnosula; floralia subtriquetra, ovata, acuta, concava. Flores sessiles, alterni, parvi; bracteolæ ovatæ, acutæ, demum subcristatæ, cristula crassa deflexa.

Species 1, a regione Uralensi usque ad Soongaricam extensa. *Bunge, Anabas. Revis.* 20. *Pall. Ill. Pl. t.* 31 (*Salsola*).

63. **Noæa**, *Moq. in DC. Prod.* xiii. ii. 207, *excl. sp.*—Flores hermaphroditi, axillares, 2-bracteolati. Perianthium chartaceum, 5-partitum; segmenta (quorum 3 exteriora) oblonga v. ovato-lanceolata, acuta v. obtusa, fructifera paullo accrescentia, dorso supra medium alata. Stamina 5, disco minuto inserta, filamentis planis; antheræ lineari-sagittatæ, connectivo in appendicem e basi lata lanceolatam albidam producto; staminodia 0. Ovarium ovoideum, compressum, in stylum brevem attenuatum, stigmatibus 2 brevibus recurvis; ovulum ab apice funiculi suspensum. Utriculus perianthio inclusus, late ovoideus, a dorso compressus, pericarpio membranaceo semini non adhærente. Semen inversum, orbiculare, compressum, testa membranacea, albumine 0; embryo plano-spiralis, viridis, cotyledonibus angustis, radicula elongata supera.—Frutices inermes v. spinosi, rigidi, ramosi, glabri v. sericeo-villosi, rarius herbæ annuæ, caule sæpe tortuoso lignoso, ramis divaricatis. Folia alterna, sessilia, brevia et lata, v. elongata v. triquetra, mutica v. spinescentia. Flores parvi v. minuti, solitarii, rigidi.

Species ad 6, Africæ borealis et Asiæ occidentalis incolæ. *Bunge, Anabas. Revis.* 21. *et in Boiss. Fl. Or.* iv. 964. *Labill. Pl. Syr. Dec.* ii. *t.* 5 (*Salsola*). *Del. Fl. Eg. t.* 21, *f.* 2 (*Salsola*). *Jaub. et Spach, Ill. Pl. Or. t.* 132 (*Anabasis*). *Pall. Ill. Pl. t.* 24 (*Salsola*).

64. **Girgensohnia**, *Bunge, Rel. Lehm.* 478 (302); *et Anabas. Revis.* 29, *t.* 1, *f.* 24.—Flores hermaphroditi, axillares, 2-bracteolati, bracteolis coriaceis. Perianthium 5-partitum, segmenta (quorum 3 exteriora) oblonga, chartacea, 1-nervia, 2–3 v. omnia dorso supra medium tuberculata, tuberculo demum in alam deorsum flexam excrescente. Stamina 5, disco minuto inserta, staminodiis totidem carnosulis intus et margine cellulis clavatis vestitis alterna, filamentis subulatis medio dilatatis; antheræ ovoideo-cordatæ, obtusæ v. connectivo in apiculum producto. Ovarium a dorso compressum, ovoideum v. subglobosum, sæpius superne glandulosum, in stylum angustatum, stigmate capitato 2-lobo v. stigmatibus 2 oblongis obtusis; ovulum subsessile. Utriculus perianthio alato inclusus, a dorso compressus, pericarpio membranaceo semini non adhærente. Semen erectum, orbiculare, compressum, testa membranacea, albumine 0; embryo spiralis, radicula infera.—Herbæ annuæ v. fruticuli glabri v. puberuli, ramosi, ramulis obscure articulatis teretibus v. angulatis et costatis. Folia parva, opposita, sessilia, triangulari-ovata, acuta v. pungentia, coriacea, integerrima v. serrulata. Flores bracteolis inclusi, parvi v. minuti, solitarii.

Species 4, Asiæ mediæ et occidentalis incolæ. *Boiss. Fl. Or.* iv. 967. *Jaub. et Spach, Ill. Pl. Or. t.* 133 (*Anabasis*). *Pall. Ill. Pl. t.* 27 (*Salsola*).

65. **Anabasis**, *Linn. Gen. n.* 312.—Flores hermaphroditi et fœminei, axillares, 2-bracteolati. Perianthium scariosum, basi truncatum, 5-partitum; segmenta (quorum 3 exteriora) oblonga, obtusa, fructifera immutata v. exteriora v. omnia demum alata, alis brevibus v. amplis. Stamina 5, disco brevi inserta, staminodiis totidem obtusis sæpe glandulosis alterna; filamentis subulatis medio paullo incrassatis; antheræ oblongo-cordatæ, connectivo obtuso v. apiculato. Ovarium compressum, ovoideo-globosum, læve pubescens v. papillosum, in stylum brevem angustatum, stigmatibus 2 brevibus erectis v. recurvis; ovulum subsessile. Utriculus perianthio inclusus v. exsertus, subglobosus, a dorso compressus, pericarpio sicco carnoso v. baccato semini non adhærente. Semen erectum, orbiculare, compressum, testa membranacea v. subcoriacea lævi v. granulosa, albumine 0; embryo spiralis, radicula infera v. ascendente.—Herbæ perennantes v. fruticuli glabri

v. ad nodos et axillas tomentosi, ramis articulatis, internodiis interdum turgidis. Folia opposita, carnosa, sæpe obsoleta v. per paria in cupulam connata, obtusa v. apice setigera. Flores parvi v. minuti, solitarii v. glomerati, perianthio fructifero sæpe valde revoluto, bracteolæ minutæ v. setaceæ.

Species 15, regionis Mediterraneæ et Asiæ occidentalis centralisque incolæ. *Bunge, Anab. Revis.* 34, *et in Boiss. Fl. Or.* iv. 968.

Genus in sectiones sequentes dividitur :—

1. *Euanabasis.* Perianthium fructiferum 3–5-alatum. Antheræ obtusæ v. apiculatæ; staminodia ciliata. ANABASIS, *Moq. in DC. Prod.* xiii. ii. 210, *excl. sp. pluribus. Bunge, Anabas. Revis* 34 *et in Boiss. Fl. Or.* iv. 968. *Pall. Ill. Pl. t.* 8.

2. *Brachylepis.* Perianthium fructiferum non alatum. Antheræ obtusæ; staminodia minuta. BRACHYLEPIS, *C. A. Mey. Fl. Alt.* i. 370. *Moq. in DC. Prod.* xiii. ii. 216, *excl. sp. n.* 1. *Bunge, Anabas. Revis.* 47 ; *et in Boiss. Fl. Or.* iv. 971. *Ledeb. Ic. Fl. Ross. t.* 48.

3. *Fredolia.* Perianthium fructiferum 5-alatum. Connectivum in appendiculam acuminatam productum ; staminodia glaberrima. Herba cæspitosa, pulvinata, habitu *Aretiæ*, foliis imbricatis.—*Algeria.* FREDOLIA, *Coss. et Dur. mss. ex Moq. et Coss. in Bull. Soc. Bot. Fr.* ix. 299, *t.* 2.

66. **Nanophytum,** *Less. in Linnæa,* ix. 197.—Flores hermaphroditi, solitarii, axillares, 2-bracteolati. Perianthium 5-partitum, segmenta (quorum 2 exteriora) convoluta, chartacea, lanceolata, acuminata, concava, enervia, demum valde aucta, inappendiculata, nitida. Stamina 5, disco parvulo inserta, filamentis elongatis compressis ; antheræ elongato-sagittatæ, loculis longe discretis, connectivo in apicem subulatum elongatum rigidulum desinente ; staminodia minuta. Ovarium ovoideum, paullo compressum, in stylum attenuatum, stigmatibus 2 recurvis fructu erectis ; ovulum subsessile. Utriculus perianthio insigniter aucto inclusus, turgidus, globoso-ovoideus, pericarpio tenuiter membranaceo semini non adhærente. Semen erectum, utriculo conforme, vix a dorso compressum, testa membranacea hyalina, albumine 0 ; embryo spiralis, viridis, subcochleatus, cotyledonibus angustis, radicula gracili infera.—Fruticulus pulvinatus, rigidus, glaber v. axillis foliorum lanatis, caudice crasso lignoso, ramulis tortuosis intertextis. Folia parva, alterna, sessilia, triangulari-ovata, acuta, rigida, coriacea, concava. Flores parvi, primum inter bracteolas foliaque absconditi, demum longe evoluti et exserti ; perianthia fructifera folia longe superantia.

Species 1, a regione trans-Uralensi usque ad Soongaricam extensa. *Moq. in DC. Prod.* xiii. ii. 200. *Bunge, Anabas. Revis.* 50, *et in Boiss. Fl. Or.* iv. 972. *Pall. Ill. Pl. t.* 48 (*Polycnemum*).

67. **Petrosimonia.**—*Bunge, Anabas. Revis.* 52.—Flores hermaphroditi, solitarii, axillares, 2-bracteolati, bracteolis navicularibus sæpe demum induratis. Perianthium 2–5-partitum, segmenta (quorum 2 exteriora) ovato-lanceolata, basi lata v. angustata, concava, membranacea v. chartacea, enervia, apice integra v. lacera, fructifera immutata. Stamina 1–5, disco inconspicuo inserta, filamentis compressis ; antheræ exsertæ, lineari-oblongæ, sagittatæ, apiculatæ v. connectivis apice sæpe 3-dentatis cohærentibus ; staminodia 0. Ovarium late ovoideum, compressum ; stylus gracilis, stigmatibus 2 filiformi-subulatis ; ovulum subsessile. Utriculus perianthio bracteolisque arcte imbricatis inclusus, late oblongus v. ovoideus, a dorso compressus, vertice paullo incrassato, pericarpio membranaceo v. subchartaceo semini non adhærente. Semen erectum, orbiculare, compressum, testa membranacea, albumine 0 ; embryo plano-spiralis, cotylédonibus gracilibus, radicula elongata infera.—Herbæ annuæ, pubescentes sericeæ v. subvillosæ, pilis bicuspidatis, ramosæ, ramis gracilibus teretibus. Folia opposita et alterna, patentia v. recurva, sessilia, linearia acicularia v. semiteretia, acuta v. obtusa. Flores parvi, inconspicui, cum bracteolis caduci.

Species ad 7, Asiæ centralis et occidentalis incolæ. *Bunge in Boiss. Fl. Or.* iv. 972. *Pall. Ill. Pl. t.* 49 *ad* 54 (*Polycnemum*).

68. **Halocharis,** *Moq. in DC. Prod.* xiii. ii. 201, *ex parte.*—Flores hermaphroditi, axillares, solitarii, 2-bracteolati. Perianthii segmenta 5 (quorum 2 exteriora), lanceolata,

membranacea, hyalina, enervia, fructifera immutata. Stamina 5, disco carnosulo inserta, filamentis linearibus; antheræ lineares, loculis ab apice discretis angustis parallelis, connectivo in vesiculam sessilem v. stipitatam complanatam v. inflatam interdum basi tubulosam producto; staminodia 0. Ovarium late ovoideum, compressum, in stylum gracilem abrupte angustatum, stigmatibus 2 elongatis subulatis; ovulum ab apice funiculi suspensum. Utriculus perianthio inclusus, late ovoideus v. orbicularis, a latere compressus, pericarpio membranaceo ruguloso semini non adhærente. Semen inversum, lenticulare v. orbiculare, compressum, testa membranacea, albumine 0; embryo plano-spiralis, cotyledonibus gracilibus, radicula laterali ascendente.—Herbæ annuæ, sæpe parvulæ, prostratæ v. suberectæ, ramosæ, hispido-pilosæ et villosulæ, ramulis sæpe verticillatis. Folia alterna, sessilia, carnosula, oblonga v. anguste ovata, pilis rigidis apice barbata. Flores inconspicui, inter folia reconditi, et lana laxa immersi, cum bracteolis decidui; appendices antherarum violaceæ sulphureæ v. stramineæ.

Species 5, Persiæ, Affghanistaniæ, et Asiæ centralis incolæ. *Bunge, Anabas. Revis.* 61, *t.* 1, *f.* 1 *ad* 4, *et in Boiss. Fl. Or.* iv. 974.

69. **Halimocnemis**, *C. A. Mey. Fl. Alt.* i. 381.—Flores hermaphroditi, axillares, solitarii, 2-bracteolati. Perianthium 3–5 partitum, segmentis basi demum induratis coalitis fructiferis inappendiculatis, 2 exterioribus majoribus. Stamina 3–5, disco perianthii basin vestiente inserta, filamentis planis; antheræ elongatæ, loculis basi liberis, connectivo in vesiculam pyriformem sessilem v. stipitatam inflatam albam v. coloratam producto; staminodia 0. Ovarium compressum, ovoideum, vertice coriaceo in stylum angustato, stigmatibus brevibus v. elongatis sæpius dilatatis et laceris; ovulum funiculo elongato suspensum. Utriculus perianthio basi indurato subgloboso inclusus, a latere compressus, pericarpio membranaceo vertice calloso semini non adhærente. Semen inversum, orbiculare, compressum, testa carnosula alba, albumine 0; embryo spiralis, cotyledonibus elongatis complanatis, radicula supera.—Herbæ annuæ, crasse carnosæ, dichotome ramosissimæ, glabræ v. pilosæ, ramis interdum trigonis robustis. Folia alterna, crassa, sessilia, obtusa v. cuspide deciduo terminata. Flores parvi; perianthia fructifera majuscula, cum bracteolis foliaceis decidua.

Species 9, Persicæ et Aralo-Caspicæ. *Bunge, Anab. Revis.* 65, *t.* 1, *f.* 5 *ad* 10, *et in Boiss. Fl. Or.* iv. 976. *Pall. Ill. Pl. t.* 56 (*Polycnemum*).

Halotis, *Bunge, Anab. Revis.* 73, *t.* 1, *f.* 11, *et in Boiss. Fl. Or.* iv. 978, *et in Act. Hort. Petrop.* v. 644, genus ab auctore dubitatim proposita, ab *Halimocnemide* differt perianthii segmentis exterioribus fructiferis basi auriculatis.

70. **Halanthium**, *C. Koch in Linnæa*, xvii. 313.—Flores hermaphroditi, axillares, 2-bracteolati, bracteolis post anthesin induratis. Perianthium membranaceum, 5-partitum; segmenta (quorum 2 exteriora) oblongo-lanceolata, acuta v. 2-loba, enervia v. 2 exteriora 3-nervia, fructifera basi libera immutata v. exteriora dorso alata. Stamina 5, hypogyna, filamentis planis; antheræ anguste lineari-elongatæ, connectivo in vesiculam magnam hyalinam pyriformem v. globosam producto; staminodia 0. Ovarium elongatum, compressum, vertice coriaceo in stylum crassiusculum angustato, stigmatibus 2 crassiusculis; ovulum subsessile. Utriculus perianthio inclusus, lineari-oblongus, a latere compressus, pericarpio membranaceo semini non adhærente. Semen erectum, subovoideum v. oblongum, compressum, testa membranacea, albumine 0; embryo spiralis, viridis, radicula supera.—Herbæ annuæ, glabræ v. pubescentes. Folia alterna v. superiora subopposita, sessilia, brevia v. elongata, semiteretia, obtusa v. seta apiculata. Flores oppositi et solitarii, v. ad apices ramulorum congesti, sæpe cum foliis floralibus basi induratis v. nuceis conjunctim decidui, pro ordine majusculi.

Species 8, Asiæ occidentalis et centralis incolæ. Sectiones sequentes a variis auctoribus pro generibus propriis habentur:—

1. *Physogeton*, forma typica Kochii, perianthii fructiferi segmentis 2 exterioribus alatis. *Bunge, Anabas. Revis.* 80, *t.* 1, *f.* 16 *ad* 23, *et in Boiss. Fl. Or.* iv. 981. *Stschegl. in Bull. Soc. Imp. Nat. Mosc.* 1853, i. *t.* 5 (*Halimocnemis*). Physogeton, *Jaub. et Spach, Ill. Pl. Or. t.* 135.

2. *Gamanthus.* Perianthii segmenta omnia fructifera immutata. GAMANTHUS, *Bunge, Anabas. Revis.* 76, *t.* 1, *f.* 13 *ad* 15, *et in Boiss. Fl. Or.* iv. 979. *Pall. Ill. Pl. t.* 20 (*Salsola*).

71. **Halarchon,** *Bunge, Anabas. Revis.* 75, *t.* 1, *f.* 12, 25, 26.—Flores hermaphroditi, axillares, solitarii, 2-bracteolati. Perianthium hyalinum, 5-partitum; segmenta (quorum 2 exteriora) oblongo-lanceolata, acutissima, enervia, fructifera immutata. Stamina 5, disco minutissimo inserta, filamentis linearibus apice emarginato-truncatis; antheræ anguste lineares, loculis discretis, connectivo in vesiculam globoso-pyriformem roseam producto; staminodia 0. Ovarium columnare; stylus basi bulboso-incrassatus, medio denticulis verticillatis auctus, stigmate capitato 2-lobo indusio membranaceo infundibulari lacero demum fecundatione peracta reverso cincto; ovulum ab apice funiculi pendulum. Utriculus in specimine immaturus. Semen erectum, radicula supera *ex Bungeo.*—Herba annua, glauca, canescens, caule erecto, ramis alternis patentibus v. decumbentibus. Folia infima opposita, cætera alterna, semi-teretia, pungentia, semi-amplexicaulia. Flores parvi, superiora congesta; bracteolæ cuspidatæ.

Species 1, in salsuginosis Affghanistaniæ obvia. *Bunge in Boiss. Fl. Or.* iv. 979. Planta valde singularis, *Halanthio* ut nobis videtur, ovarii indole excepto, proxime affinis, an ejus forma sexualis?

72. **Piptoptera,** *Bunge in Act. Hort. Petrop.* v. 644.—Flores hermaphroditi, axillares, 2-bracteolati. Perianthium 5-partitum; segmenta basi indurata et connata, 2 exteriora navicularia, 3-nervia, 3 interiora angustiora, enervia; fructifera 2 exteriora latissime membranaceo-alata, alis demum articulatim solutis thecam a latere subcompressam 6-costatam supra medium 2-auriculatam relinquentibus. Stamina 5, disco obscuro inserta, filamentis linearibus; antheræ minutæ, cordatæ, connectivo in vesiculam conicam subacutam producto; staminodia 0. Ovarium ovoideo-globosum, in stylum basi usque 2-partitum productum, cruribus (stigmatibus) subulatis strictis erectis; ovulum ab apice funiculi suspensum. Utriculus perianthii basi nuceo inclusus, orbicularis, compressus, pericarpio membranaceo semini non adhærente. Semen inversum, orbiculare, compressum, testa tenuissima, albumine 0; embryo plano-spiralis, radicula supera.—Herba annua?, ramosissima, habitu *Salsolæ*, crassa, hispidula, ramis patentibus. Folia alterna, sessilia, superiora recurva, carnosa, trigona, acuta; floralia breviora, basi late ovata, pungentia, late membranaceo-marginata. Flores solitarii, sessiles; bracteolæ foliis subsimiles sed longiores, persistentes.

Species 1, Turkestaniæ incola. Exemplar mancum vidimus, a Maximoviczio benevole missum.

73. **Halogeton,** *C. A. Mey. Fl. Alt.* i. 378, *ex parte.*—Flores polygami, glomerati, axillares, bracteolati v. ebracteolati. Perianthium 5-partitum; segmenta (quorum 2 exteriora) dorso apicem versus alata v. gibba, fructifera immutata v. rarissime indurata. Stamina 5 v. pauciora, disco parvo inserta v. hypogyna, filamentis linearibus; antheræ oblongæ v. didymæ, inappendiculatæ; staminodia 0 v. 5, filamentis alterna, lingulata, apice integra v. fimbriata. Ovarium ovoideum, compressum, in stylum brevem subulatum angustatum, stigmatibus 2 filiformibus suberectis; ovulum funiculo brevi v. elongato. Utriculus perianthio inclusus, late ovoideus, a latere compressus, pericarpio membranaceo semini plus minusve adhærente. Semen inversum, rarissime horizontale, orbiculare v. gibbum, extremitate radiculari porrecto, testa membranacea v. subcoriacea, albumine 0; embryo spiralis, radicula porrecta laterali v. supera.—Herbæ annuæ, ramosissimæ, crassiusculæ, glabræ arachnoideæ v. subvillosæ. Folia alterna, sessilia, carnosula, teretia v. oblonga, obtusa v. apice setifera, axillis sæpe pilosis. Flores minuti, lana laxa immersi v. stipati, centralis ebracteolatus, lateralium 2 exteriores bracteolati; in glomerulis infimis flos medius hermaphroditus, laterales fœminei; in glomerulis trifloris sæpe omnes hermaphroditi, in multifloris exteriores interdum perianthio orbati.

Species 5, Hispaniæ australis, Algeriæ, Asiæque centralis incolæ. *Moq. in DC. Prod.* xiii. ii. 204, *excl. sp. n.* 1, 2, 3. *Bunge, Anabas. Revis.* 93, *et in Boiss. Fl. Or.* iv. 985. *Ledeb. Ill. Fl. Ross. t.* 40.

MICROPEPLIS, *Bunge, Rel. Lehm.* 474 (298), 479 (303), seminibus sæpissime horizontalibus, ab

auctore ipso (Anabas. Revis. 97) pro sectione *Halogetonis* habendum est, transitum præbet ad *Salsolaceas* veras.

74. **Sympegma,** *Bunge in Bull. Acad. Sc. Petersb.* xxv.; *Mel. Biol.* x. 306.—Flores hermaphroditi, ebracteolati, axillares, fasciculati. Perianthium compressum, 5-partitum; segmenta demum cartilaginea, oblonga, concava, dorso infra apicem late alata; alæ horizontales, oblongæ, venosæ, 2 exteriores majores basi gibbæ. Stamina 5, filamentis basi breviter connatis, staminodiis totidem interpositis; antheræ oblongo-cordatæ, inappendiculatæ. Ovarium lageniforme, compressum, in stylum latum attenuatum, stigmatibus 2 subulatis recurvis; ovulum ab apice funiculi suspensum. Utriculus perianthio inclusus, orbicularis, compressus, pericarpio crassiusculo membranaceo semini non adhærente. Semen inversum, utriculo conforme, testa membranacea, albumine 0; embryo spiralis, radicula supera.—Fruticulus ramosissimus, glaber, cortice fere suberoso. Folia sparsa, lineari-filiformia, carnosula. Flores in apices ramulorum terminales, in globulum demum induratum conferti.

Species 1, Asiæ centralis incola. Descriptio ex schedis Bungei et exemplare manco a Maximoviczio benevole communicato. Staminodia a Bungeo descripta non vidimus.

TRIBUS X. SARCOBATIDEÆ.

75. **Sarcobatus,** *Nees in Trav. Pr. Neuwied. ed. angl.* 518. (FREMONTIA, *Torr. in Emory Rep.* 95, 317, *t.* 3.)—Flores monoici v. dioici, ebracteolati, dimorphi. Fl. ♂ achlamydei. Stamina inter squamas stipitatas peltatas amenti terminalis irregulariter sparsa, filamentis brevibus; antheræ didymæ. Ovarii rudimenta 0. Fl. ♀ axillares, solitarii, subsessiles. Perianthium a dorso compressum, turbinatum, cum ovario omnino confluens, supra medium transverse incrassatum, vertice conico in stigmata 2 crassa subulata recurva papillosa angustato; ovulum pyriforme, sessile. Fructus coriaceus, rhombeo-obovoideus, supra medium ala scariosa horizontali radiatim venosa crenulata cinctus, parte infra-alari turbinato compresso, supra-alari conico puberulo stigmatibus persistentibus coronato. Semen erectum, orbiculare, compressum, testa membranacea hyalina; embryo plano-spiralis, viridis, radicula infera.—Frutex erectus, ramosus, foliosus, glaberrimus v. ramulis novellis puberulis, ramis spinescentibus. Folia alterna, in ramos articulata, linearia, sessilia, carnosula, integerrima. Amenta cylindracea, squamis persistentibus. Stamina sub quavis squama ad 3, caduca. Fl. ♀ parvi, cito excrescentes, subsessiles, basi tenuiter barbati.

Species 1, Americæ borealis regionibus interioribus indigena. *Seubert in Bot. Zeit.* 1844, 753, *t.* 7. Genus anomalum; an flores ♀ achlamydei, pericarpio alato, et membrana loculum vestiente pro testa descriptis?

TRIBUS XI. EUBASELLEÆ.

76. **Basella,** *Linn. Gen. n.* 382 (Basela).—Flores hermaphroditi, sessiles, cum rhachi spicæ articulati; bracteolæ infraflorales minutæ, caducæ, florales perianthio adnatæ in cupulam 2-labiatam connatæ. Perianthium carnosum, leviter compressum, ad medium 5-fidum, demum subbaccatum, tubo late obconico; lobi erecti, obtusi, concavi, fructiferi incurvi. Stamina 5, fauce tubi inserta, filamentis late subulatis, alabastro rectis; antheræ versatiles, in alabastro posticæ, oblongæ v. subsagittatæ, inclusæ. Ovarium globosum; styli 3, basi connati, stigmatibus lineari-clavatis intus papillosis; ovulum subsessile. Utriculus perianthio inclusus et basi adnatus, globosus, pericarpio tenui semini adhærente. Semen erectum, globosum, leviter compressum, testa crustacea, albumine parcissimo; embryo plano-spiralis, cotyledonibus magnis oblongo-lanceolatis tenuibus involutis radicula elongata acuta descendente multo latioribus.—Herba succulenta, glaberrima, dextrorsum volubilis, alte scandens, ramosissima. Folia alterna, subsessilia v. petiolata, ovata oblonga v. cordata, acuta v. obtusa, integerrima. Flores in spicas axillares breves v. elongatas simplices v. ramosas dispositi, albi violacei v. rubri. Bractea parva, lata, bracteolæque caducæ.

Species 1, Asiæ et Africæ tropicæ indigena, alibi inter tropica culta. *Moq. in DC. Prod.* xiii. ii. 222 (*excl. cit. H. B. et K.*). *Gærtn. Fruct.* 126. *Lam. Ill. t.* 215, *f.* 1. *Wight, Ic. t.* 896. *Jacq. f. Eclog. t.* 161.

77. **Tournonia,** *Moq. in DC. Prod.* xiii. ii. 225.—Flores hermaphroditi, cum pedicello apice ebracteolato articulati; bracteolæ florales basi perianthii adnatæ, orbiculares, concavæ. Perianthium carnosulum, 5-partitum, tubo brevi; segmenta oblongo-rotundata, subæqualia, obtusa, reticulatim nervosa. Stamina 5, fauci tubi inserta; antheræ parvæ, late oblongæ, versatiles, in alabastro posticæ. Ovarium late ovoideum; styli 3, basi connati, stigmatibus capitatis; ovulum subsessile. Utriculus perianthio immutato inclusus?, compresso-ovoideus, pericarpio membranaceo. Semen erectum . . . —Herba volubilis, glaberrima, gracilis, exsiccata nigrescens. Folia alterna, petiolata, ovato- v. rotundato-cordata, nervosa et reticulatim venosa. Flores minuti, in racemos abbreviatos axillares cymoso-ramosos dispositi, rhachi pedicellisque crassis. Bractea ad basin pedicelli brevis, caduca; bracteolæ infraflorales si adsint valde inconspicuæ, pedicello adnatæ, florales perianthii laciniis consimiles, sed breviores et latiores.

Species 1, Novæ Granadæ ad Quindiu incola. Descriptio fructus ex Moq. l. c.

78. **Ullucus,** *Lozano in Senan. Nuov. Granad.* 1809, 185, *ex DC. Prod.* iii. 360. (Melloca, *Lindl. in Gard. Chron.* 1847, 685, *et* 1848, 828, *cum ic. xylog.*)—Flores hermaphroditi, cum pedicello apice 2-bracteolato articulati; bracteolæ infraflorales minutissimæ, pedicello persistentes; florales basi perianthii insertæ, orbiculares. Perianthium rotatum, membranaceum, 5-partitum, tubo brevissimo; segmenta æqualia, a basi late ovata, caudato-acuminata. Stamina 5, fauci tubi inserta, filamentis brevibus subulatis; antheræ minutæ, basifixæ, fere orbiculares, rimis lateralibus supra medium dehiscentes, in alabastro erectæ. Ovarium minutum, subglobosum; stylus brevis, crassus, stigmate obtuso; ovulum subsessile. Fructus perianthio inferne inclusus, ovoideus, baccatus. Semen erectum . . . —Herba carnosula, decumbens et volubilis, rhizomate repente caulibusque angulatis radices tuberiferas emittentibus. Folia alterna, crasse petiolata, rotundato-cordata, acuta, integerrima. Flores in racemos axillares amplos laxifloros dispositi, aurei. Bractea ad basin pedicelli lanceolata, membranacea, persistens; bracteolæ infraflorales valde inconspicuæ, florales membranaceæ, perianthio multo breviores.

Species 1, in Andibus Americæ australis indigena et culta. *Moq. in DC. Prod.* xiii. ii. 224 (Melloca). *Dcne. in Rev. Hortic. ser.* 3, ii. 441, *f.* 25. *Hook. Bot. Mag. t.* 4617, *ic. in Lem. Jard. Fleur. t.* 221, repetita. Fructus a nobis non visus, et semina a nemine descripta. Genus structura antherarum ab omnibus affinibus diversum. Opus Lozani a Candolleo citatum nobis ignotum est, nec in ulla Bibliographia Botanica recensitum. Nomen tamen, etsi primum in Prodromo editum, jure prioritatis gaudeat contra Lindleyanum.

Tribus XII. Boussingaultieæ.

79. **Boussingaultia,** *H. B. et K. Nov. Gen. et Sp.* vii. 194, *t.* 645 *bis*.—Flores hermaphroditi, cum pedicello apice 2-bracteolato articulati; bracteolæ infraflorales persistentes v. deciduæ; florales basi v. supra basin perianthii adnatæ. Perianthium membranaceum v. carnosulum, 5-partitum, tubo brevi; segmenta oblonga, obtusa, concava, patentia. Stamina 5, fauce tubi perianthii inserta, filamentis filiformi-subulatis in alabastro supra medium reflexis; antheræ oblongæ, versatiles, inclusæ. Ovarium ovoideum, umbonatum; stylus validus, rectus v. flexuosus, stigmate magno 3-lobo, v. styli 3, stigmatibus capitatis v. clavatis; ovulum subsessile. Utriculus perianthio inclusus, globosus, apice umbonatus, crasse stipitatus, pericarpio crassiusculo semini adhærente. Semen erectum, subreniforme, testa crustacea; embryo semiannularis, clavatus, albumen farinaceum semicingens, cotyledonibus latis plano-convexis, radicula crassa descendente.—Herbæ glaberrimæ, volubiles, radice perennante, caulibus robustis v. gracilibus. Folia alterna, petiolata v. subsessilia, ovata elliptica v. cordata, carnosa v. crassiuscula, integerrima. Flores parvi,

in racemos axillares et terminales simplices v. ramosos laxos v. densifloros dispositi, breviter v. gracile pedicellati. Bracteæ ad basin pedicelli persistentes v. deciduæ ; bracteolæ infraflorales pedicello adnatæ v. caducæ, florales ima basi perianthii v. altius insertæ, segmentis breviores.

Species ad 10, Americæ tropicæ incolæ. Genus in sectiones 2 dividitur:—

1. Stylus validus, elongatus, stigmate 3-lobo. BOUSSINGAULTIA, *H. B. et K. l. c.* TANDONIA, *Moq. in DC. Prod.* xiii. ii. 226.

2. Styli 3, elongati, basi connati, stigmatibus clavatis v. capitatis. BOUSSINGAULTIA, *Moq. in DC. l. c.* 228, *non H. B. et K. Bot. Mag. t.* 3620. *Miers in Seem. Journ. Bot.* ii. 161, *t.* 18.

80. **Anredera,** *Juss. Gen.* 84. (Clairisia, *Abat. Act. Soc. Med. Seville, ex Moq. in DC. Prod.* xiii. ii. 229.)—Flores hermaphroditi, cum pedicello apice 2-bracteolato articulati ; bracteolæ infraflorales caducæ ; florales basi perianthii insertæ, naviculares, perianthium includentes, dorso longitrorsum latissime alatæ. Perianthium 5-partitum, hyalinum, tubo brevissimo carnosulo ; segmenta subæqualia, oblonga, obtusa, 1-nervia, exteriora paulo majora. Stamina 5, disco crasso hypogyno inserta, filamentis subulatis in alabastro infra apicem reflexis ; antheræ versatiles, sagittatæ, inclusæ. Ovarium minutum, rotundatum, compressum ; styli 3, ima basi connati, stigmatibus dilatatis 2–3-lobis ; ovulum sessile. Utriculus perianthio bracteolisque inclusus, crasse stipitatus, ovoideo-globosus, pericarpio carnosulo semini adhærente. Semen erectum, rotundatum, compressum, testa coriacea brunnea ; embryo fere annularis, albumen parcum farinaceum cingens, cotyledonibus subclavatis, radicula valida infera.—Herba volubilis, gracilis, glaberrima, radice tuberosa, caule angulato. Folia alterna, in petiolum angustata, ovata, acuta, integerrima, carnosula. Flores parvi, albi, in spicas axillares pedunculatas cylindraceas flexuosas dispositi. Bractea ad basin pedicelli lanceolato-subulata, decidua ; bracteolæ infraflorales triangulares, 1-nerves, florales maximæ, persistentes, in alas basi et apice productæ.

Species 1, Americæ subtropicæ a Texas ad Peruviam incola, in Egypto et in ins. Philippinis in hortis culta. *Gærtn. f. Fruct. t.* 213. *Lam. Ill. t.* 215, *f.* 2 (Basella).

ORDO CXXXII. PHYTOLACCACEÆ.

Endl. Gen. 975. Lindl. Veg. Kingd. 508. Baill. Hist. Pl. iv. 23.

Flores hermaphroditi v. unisexuales. *Perianthium* herbaceum v. coriaceum, rarius membranaceum v. coloratum, 4–5-partitum, rarissime obconicum v. disciforme ; segmenta æqualia v. inæqualia, oblonga v. orbicularia, obtusa, æstivatione imbricata ; fructifera persistentia, erecta patentia v. reflexa, immutata v. rarius aucta. *Petala* (*Stegnospermate* excepto) 0. *Stamina* 4 v. plura, raro perigyna, sæpius disco hypogyno inserta, 1–∞-seriata, dum segmentis perianthii isomera sæpissime iis alterna, dum plura plus minusve irregulariter inserta v. segmentis opposita et alterna ; filamenta filiformia v. subulata, basi libera v. connata, sæpissime persistentia, antheris deciduis. *Antheræ* dorso affixæ, 2-loculares, loculi sæpe a basi alte liberi, rimis anticis lateralibus v. posticis dehiscentes, sæpissime deciduæ ; pollen globosum. *Discus* hypogynus obscurus v. annularis. *Ovarium* superum, e carpellis 1 v. pluribus distinctis v. connatis, fundo perianthii sessilibus v. rarissime toro impositis. *Stylus* brevis v. 0 ; stigmata linearia filiformia v. subulata, intus papillosa v. rarius apicibus penicillatis v. capitellatis, sæpius recurva. *Ovula* in carpellis solitaria, funiculo brevi basi rarius angulo interiore loculi inserta, amphitropa v. campylotropa, micropyle non raro fungoso. *Fructus* nunc monocarpicus, coriaceus, crustaceus baccatus v. samaroideus, nunc polycarpicus, carpellis distinctis v. connatis, 1-locularis v. locularis tot quot carpellis 1-spermis. *Semina* erecta, rarissime

ascendentia, globosa reniformia v. sublenticularia, compressa; testa membranacea v. crustacea, lævis v. rugosa; arillus si adsit parvus, 2-lobus, in *Stegnospermate* magnus, semen includens. *Embryo* periphericus, albumen farinaceum v. carnosum cingens, in seminibus elongatis uncinatus v. superne abrupte deflexus; cotyledones incumbentes foliaceæ et plicato-convolutæ, v. lineares angustæ et semi-cylindricæ; radicula elongata, hilo proxima.

Arbores, frutices, v. herbæ basi lignosæ, sæpissime glabræ. Folia alterna, integerrima. Stipulæ 0 v. parvæ v. ad tuberculas reductæ. Flores sæpissime racemosi, rarius axillares, racemis terminalibus et axillaribus, sæpius virides v. albi, sæpissime bracteati et 2-bracteolati.

Species ad 60, pleræque tropicæ et subtropicæ; paucæ regiones temperatas utriusque hemispheriæ incolunt, in frigidis et alpinis desunt.

Ordo *Chenopodiaceis* affinis, recedens habitu, floribus racemosis, staminibus numerosis v. perianthii segmentis isomeris iisque alternis v. irregulariter insertis, ovario sæpe polycarpico fructuque magno. A *Ficoidearum* generibus e tribu *Mollugineanum* carpellis uniovulatis *Phytolaccaceæ* non distinguuntur nisi habitu, defectu corollæ et staminodiorum, foliis nunquam oppositis et inflorescentia racemosa. *Illecebraceæ* differunt habitu semper herbaceo, foliis parvis augustis, stipulis scariosis, inflorescentia, et fructu membranaceo.

FORMÆ ABNORMES.

Petala adsunt in *Stegnospermate*.

Ovarium semi-inferum in *Agdestide*; 1-loculare, polyspermum in *Stegnospermate*.

Fructus in *Petiveria* elongatus; in *Stegnospermate* capsularis, 3-valvis, 3–5-spermus.

Arillus in *Stegnospermate* magnus, semen includens.

CONSPECTUS GENERUM.

Tribus I. Rivineæ. Flores hermaphroditi, rarius unisexuales. Perianthium 4–5-partitum. Ovarium monocarpicum. Fructus indehiscens. Cotyledones plicato-convolutæ.

* *Fructus globosus v. elongatus, baccatus v. coriaceus.*

1. Rivina. Perianthii segmenta 4, parva, æqualia. Stamina 4. Stylus brevis, stigmate capitato.—*Amer. calid., in orb. vet. introd.*

2. Villamilla. Perianthii segmenta 4, æqualia, fructifera reflexa. Stamina 8–16. Stigma sessile, penicillatum.—*Amer. trop.*

3. Ledenbergia. Perianthii segmenta 4, ampla, stellatim patentia. Stamina 12. Stylus brevis, stigmate penicillato—*Amer. trop.*

4. Mohlana. Perianthium 2-partitum, segmento altero simplici, altero 3-lobo. Stamina 4. Stylus brevis, stigmate penicillato.—*Amer. et Afric. trop.*

5. Petiveria. Perianthii segmenta 4, elongata, fructifera erecta. Fructus elongatus, apice setis uncinatis auctus.—*Amer. calid.*

6. Microtea. Perianthii segmenta 4, brevia. Fructus globosus, asper v. setis uncinatis horridus—*Amer. trop.*

7. Monococcus. Flores unisexuales. Fructus subglobosus, spinulosus.—*Austral., Nov. Caled.*

** *Fructus samaroideus, longe alatus.*

8. Seguiera. Perianthium 5-partitum, segmentis fructiferis reflexis.—*Amer. calid.*

9. Gallesia. Perianthium 4-partitum, segmentis fructiferis erectis.—*Brasil.*

Tribus II. Euphytolacceæ. Flores sæpius hermaphroditi. Perianthium 4–5-partitum. Ovarium 2-∞-carpicum. Fructus carnosus, rarissime capsularis. Testa membranacea v. crustacea, lævis. Embryo annularis, cotyledonibus angustis. Flores racemosi, rarius thyrsoidei.

10. Phytolacca. Perianthium æquale. Carpella sessilia, libera v. connata, matura indehiscentia. Testa coriacea.—*Utriusque orbis reg. trop. et subtrop.*

11. Ercilla. Perianthium æquale. Carpella toro elevato inserta, matura libera. Testa crustacea.—*Chili, Peru.*

12. ANISOMERIA. Perianthii segmenta inæqualia. Carpella sessilia, matura libera. Testa membranacea.—*Chili.*

13? BARBEUIA. Perianthium æquale. Carpella 2, connata. Fructus 2-locularis.—*Madagascar.*

Tribus III. Gyrostemoneæ. Flores unisexuales. Perianthium integrum v. lobatum. Ovarium 1–∞-carpicum, carpellis connatis. Fructus siccus. Testa transverse rugosa. Embryo annularis v. hamatus, cotyledonibus sæpissime angustis. Flores axillares v. racemosi. Genera omnia Australiana.

14. DIDYMOTHECA. Perianthium 4-lobum. Fructus didymus, 2-locularis, 2-valvis.—*Australia austr. et occid.*

15. CODONOCARPUS. Perianthium obconicum. Carpella numerosa, matura ab axi secedentia, sutura ventrali dehiscentia.—*Australia.*

16. GYROSTEMON. Perianthium obconicum. Carpella pauca v. numerosa, matura ab axi secedentia, suturis dorsalibus et ventralibus dehiscentia.—*Australia.*

17. TERSONIA. Perianthium discoideum. Fructus globosus, lignosus, multilocularis, indehiscens.—*Australia occid.*

GENERA ANOMALA.

18. STEGNOSPERMA. Calyx 5-partitus. Petala 5, decidua. Stamina 10. Carpella 3–5. *Fructus* 1-*locularis*, 3–5-*spermus.*—*California, Amer. cent., Ind. occ.*

19. AGDESTIS.—Perianthium 4–5-partitum. Ovarium semi-inferum, 4-loculare.—*Mexico.*

GENERA AFFINIA V. EXCLUSA.

Genera LECOSTEMON et STYLOBASIUM, supra, i. 609 sub *Rosaceis* descripta, a Decaisneo in Comptes Rendus Acad. Sc. Par. lxxiii. 1144, forte non immerito ab illo ordine rejiciuntur et *Phytolaccaceis* referentur, a quibus tamen pluribus notis imprimis ovarii et seminis structura distant, etsi ovarium in *Lecostemone* revera 1-ovulatum sit. In utroque ordine genera sunt valde anomala.

MACARTHURIA, Endl., ADENOGRAMMA, Reichb., GISEKIA, Linn., SEMONVILLEA, Gay, et LIMEUM, Linn. (DICARPÆA, Presl), olim *Phytolaccaceis* adscripta, ad **Ficoideas** pertinent, supra, i. 856 ad 859.

THELYGONUM, Linn., a nonnullis pro ordine distincto habitum et nuper a Baillonio inter *Phytolaccaceas* positum, nobis videtur vera **Urticacea**: vide infra.

TRIBUS I. RIVINEÆ.

1. **Rivina,** *Linn. Gen. n.* 162 (Rivinia). (Piercea, *Mill. Gard. Dict. ed* 6 *abr.*)—Flores hermaphroditi, racemosi. Perianthium corollinum, 4-partitum; segmenta subæqualia, obovato-oblonga, obtusa, concava, colorata; fructifera immutata, erecta v. patentia. Stamina 4, disco parvo hypogyno inserta, perianthii segmentis alterna, filamentis filiformibus; antheræ oblongæ, erectæ, in alabastro anticе dehiscentes. Ovarium subglobosum, compressum, 1-loculare; stylus subterminalis, brevis, curvus, stigmate capitellato; ovulum sessile, amphitropum. Fructus globosus, compressus, pericarpio carnoso semini adhærente. Semen erectum, globoso-lenticulare, testa crustacea lævi v. rugulosa, arillo inconspicuo, endopleura membranacea; embryo annularis, albumen parcum farinaceum cingens, cotyledonibus convolutis, radicula robusta hilo proxima.—Herbæ basi frutescentes, erectæ, dichotome ramosæ, glabræ v. pubescentes, ramis sulcatis. Folia alterna, gracile petiolata, ovata ovato-lanceolata v. cordato-ovata, acuta obtusa v. longe acuminata, obscure crenata, membranacea; stipulæ minutæ, caducæ. Racemi axillares et in dichotomiis ramulorum, rarius terminales, graciles, penduli, multiflori, pedicellis gracilibus; bracteæ ad basin pedicellorum subulatæ bracteolæque infraflorales caducæ. Fructus pisiformis, ruber.

Species 1 v. 2 (apud auctores 5), Americæ tropicæ et subtropicæ incolæ; in Asia tropica et ins. Africanis introductæ. *Moq. in DC. Prod.* xiii. ii. 11 (*sect. Piercea*). *Gærtn. Fruct. t.* 77. *Lam. Ill. t.* 81, *f.* 1. *Bot. Mag. t.* 1781, 2333. *Baill. Hist. Pl.* iv. *fig.* 45 *ad* 50. *J. A. Schmidt in Mart. Fl. Bras.* xiv. ii. *t.* 76.

2. **Villamilla,** *Ruiz et Pav. Fl. Per. et Chil. Ic. ined. t.* 402, *pro Rivinæ sect. admissa a Moq. in DC. Prod.* xiii. ii. 10. (Trichostigma, *A. Rich. Fl. Cub.* ii. 306.)—Flores hermaphroditi, racemosi. Perianthium herbaceum, 4-partitum; segmenta subæqualia, obovata v. rotundata, concava, fructifera paullo aucta, patentia v. reflexa. Stamina 8–16, disco parvo hypogyno inserta; lobis perianthii alterna et opposita v. irregulariter inserta, filamentis filiformibus; antheræ lineares, longe 2-fidæ, versatiles, in alabastro postice dehiscentes. Ovarium subglobosum, leviter compressum, 1-loculare; stylus 0, stigmate terminali penicillato; ovulum sessile, amphitropum. Fructus globosus, compressus, pericarpio coriaceo semini adhærente. Semen erectum, globoso-lenticulare, testa crustacea fusca lævi v. subrugulosa, arillo inconspicuo, endopleura tenuiter coriacea; embryo annularis, albumen parcum farinaceum cingens, cotyledonibus oblongis convolutis, radicula robusta hilo proxima.—Suffrutices erecti v. scandentes, glabri v. tomentosi. Folia alterna v. in ramulis abbreviatis subopposita, petiolata, ovata v. elliptica, acuminata, integerrima v. obscure crenulata; stipulæ minutæ, caducæ. Racemi in ramulis abbreviatis terminales et axillares, graciles, cernui, multiflori, pedicellis gracilibus; bracteæ ad basin v. infra medium pedicelli subulatæ, bracteolæque infraflorales caducæ. Fructus pisiformis.

Species 4 v. 5, Americæ tropicæ incolæ: 1. *V. tinctoria*, Ruiz et Pav. l. c., erecta, tomentosa, foliis ima basi cordatis, petiolo brevi. 2. *V. peruviana*, Hook. f. (*Rivina peruviana*, Moq. l. c. excl. syn. Ruiz et Pav.), foliis tomentosis basi acutis, caule erecto, floribus majoribus. 3. *V. octandra*, Hook. f. (*Rivina octandra*, Linn.; Moq. l. c. *R. dodecandra*, Jacq. Obs. t. 2. Lam. Ill. t. 81, f. 2. *Trichostigma rivinoides*, A. Rich. l. c.). His addendæ species inedita et verisimiliter *Ledenbergia roseo-ænea*, Lemaire, Illustr. Hortic. xvi. t. 591, species e regione Amazonica superiore a nobis non visa, sed ex icone et auctoris descriptione evidenter *Villamillæ* potius quam *Ledenbergiæ* referenda.

3. **Ledenbergia,** *Klotzsch in Herb. Karsten, n.* 350 *ex Moq. in DC. Prod.* xiii. ii. 14. —Flores hermaphroditi, racemosi. Perianthium herbaceum, 4-partitum; segmenta lineari-oblonga v. -obovata, obtusa, fructifera aucta, membranacea, reticulata, stellato-patentia. Stamina 12, disco subhypogyno inserta, 4 exteriora perianthii segmentis alterna, filamentis liberis filiformibus; antheræ dorsifixæ, lineari-oblongæ, basi longe 2-fidæ. Ovarium minutum, lenticulare, 1-loculare; stylus brevis, crassus, sublateralis, curvus, stigmate penicillato. Achænium parvum, perianthii segmentis magnis stellatim patentibus stipatum, lenticulare, marginatum, reticulato-nervosum, pallidum. Semen lenticulare, erectum, testa crustacea glabra, arillo 0; embryo annularis, albumen farinaceum cingens, cotyledonibus submembranaceis, exteriore majore interiorem involutam amplectente; radicula conica, hilo proxima.—Suffrutex volubilis, glaber, caule subtereti cinerascente. Folia alterna, longe gracile petiolata, ovata v. elliptico-ovata, acuminata, integerrima, membranacea; stipulæ minutissimæ, ovatæ. Flores in racemos axillares elongatos longissime pedunculatos pendulos laxe dispositi, gracile pedicellati; rhachis et pedunculus racemi fere capillares; bracteæ ad basin pedicelli bracteolæque infraflorales minutæ, caducæ.

Species 1, Columbiæ, Venezuelæ, et ins. Martinique incola. Exemplar nobis adest unicum floriferum e Venezuela, *Fendler*, n. 1297.

4. **Mohlana,** *Mart. Nov. Gen. et Sp.* iii. 170, *t.* 290. (Hilleria, *Vell. Fl. Flum.* 47, *Ic.* i. *t.* 122.)—Flores hermaphroditi, irregulares, racemosi. Perianthium herbaceum, subcampanulatum, obliquum, 2-partitum, coloratum, segmento postico oblongo obtuso, antico multo majore 3-lobo, lobis obtusis medio longiore; fructiferum paullo auctum erectum, nervis reticulatis. Stamina 4, disco parvo hypogyno inserta, lobis perianthii alterna, filamentis filiformibus subæqualibus; antheræ sagittatæ, versatiles, in alabastro postice dehiscentes. Ovarium ovoideum, obtusum, 1-loculare; stylus brevis, subterminalis, stigmate penicillato; ovulum sessile, amphitropum. Fructus globosus, compressus, pericarpio carnosulo semini adhærente. Semen erectum, globoso-lenticulare,

testa crustacea, endopleura membranacea, arillo 0; embryo annularis, albumen farinaceum endopleuræ adhærens cingens, cotyledonibus linearibus convolutis, radicula valida hilo proxima. Herba annua, erecta, fere glaberrima, caule simplici v. ramoso. Folia alterna, petiolata, ovata v. elliptico-lanceolata, acuminata, obscure crenulata, membranacea; stipulæ minutæ, caducæ. Racemi subterminales et axillares, erecti, floribus secundis albis v. rubris pedicellatis; bracteæ ad basin pedicellorum subulatæ, bracteolæque infraflorales caducæ.

Species 1, ab auctoribus multiplicata, Americæ et Africæ tropicæ incola. *Moq. in DC. Prod.* xiii. ii. 15. *Ruiz et Pav. Fl. Per. et Chil.* i. *t.* 102 (*Rivina*). *Hook. Ic. Pl. t.* 180 (*Rivina*). *J. A. Schmidt in Mart. Fl. Bras.* xiv. ii. *t.* 77.

5. **Petiveria**, *Linn. Gen. n.* 459. (Mapa, *Vell. Fl. Flum.* 59; *Ic.* i. *t.* 153.)—Flores hermaphroditi, racemosi. Perianthium herbaceum, basi conicum, 4-partitum; segmenta subæqualia, lanceolata, patentia, fructifera erecta, immutata. Stamina basi perianthii disco hypogyno inserta, v. 4 segmentis perianthii alterna, v. 5–8 sine ordine disposita, filamentis inæquilongis rigidis elongato-subulatis; antheræ dorsifixæ, lineares, basi et apice 2-fidæ. Ovarium oblongum, compressum, truncatum, tomentosum, vertice setis 1–6 subulatis deflexis auctum, 2-loculare; stylus brevis v. stigma sessile secus marginem ventralem ovarii decurrens longe penicillatum; ovulum erectum, oblongum, basifixum, amphitropum. Fructus perianthio patente stipatus, elongato-cuneatus, compressus, striato-costatus, utrinque medio carinatus, apice 2-lobus et uncinulis 1–6 rigidis appressis coronatus, pericarpio coriaceo semini adhærente. Semen erectum, lineare, testa membranacea, arillo 0, endopleura membranacea albumini parco farinoso adhærente; embryo dorsalis, erectus, cotyledonibus foliaceis inæqualibus superne replicatis, exteriore latissima basi profunde 2-loba interiorem minorem plicatam involvente, radicula valida recta infera.—Herba basi frutescens, gracilis, erecta, glabra v. puberula, dichotome ramosa, odore alliaceo. Folia alterna, petiolata, ovata, integerrima, membranacea; stipulæ minutæ. Flores parvi, in racemos axillares et terminales solitarios v. 2-nos gracillimos erectos v. nutantes sparsi, brevissime pedicellati, basi bracteati et 2-bracteolati. Fructus erectus.

Species 1, apud auctores multiplicata, Americæ calidæ a Florida ad Brasiliam australem indigena. *Moq. in DC. Prod.* xiii. ii. 8. *Gærtn. Fruct. t.* 75. *Lam. Ill. t.* 272. *Baill. Hist. Pl.* iv. *f.* 51, 52. *Sert. Petrop. t.* 18. *J. A. Schmidt in Mart. Fl. Bras.* xiv. ii. *t.* 75. Ovaria gemina Moquinio rarissime obvia a nobis non visa.

6. **Microtea**, *Swartz, Prod.* 53; *Fl. Ind. Occ.* i. 542, *t.* 12. (Schollera, *Rohr in Skrivt. Naturhist. Selsk. Kjobenh.* ii. 210. Potamophila, *Schrank, Pl. Rar. Hort. Mon.* ii. *t.* 63, *ex Moq.* Ceratococca, *Willd. in Roem. et Sch. Syst.* vi. 800. Aphananthe, *Link, Enum. Hort. Berol.* i. 383. Ancistrocarpus, *H. B. et K. Nov. Gen. et Sp.* ii. 186, *t.* 122.)—Flores hermaphroditi. Perianthium membranaceum v. herbaceum, 5-partitum; segmenta oblonga, obtusa, fructifera erecta v. patula. Stamina 5–8, basi perianthii inserta, filamentis filiformi-subulatis; antheræ dorsifixæ, didymæ, loculis rimis lateralibus dehiscentibus. Ovarium globosum, brevissime stipitatum, 1-loculare; styli v. stigmata 2–5, subulata; ovulum campylotropum, basifixum. Fructus globosus, breviter stipitatus, leviter compressus, tuberculatus v. glochidiatus, pericarpio semini adhærente. Semen erectum, testa crustacea, endopleura membranacea; embryo semi-annularis, albumen parcum carnosum cingens, cotyledonibus elongatis concavis latiusculis exteriore interiorem minorem involvente, radicula brevi crassa infera.—Herbæ annuæ, debiles, graciles, ramulis sulcatis, glabræ. Folia alterna, rarius opposita, petiolata, lanceolata elliptica ovata v. subcordata, integerrima; stipulæ 0, v. ad tuberculos reductæ. Flores minuti, in racemos terminales et axillares simplices v. ramosos rarius oppositifolios dispositi, albi; pedicellis brevibus v. elongatis, bracteatis et 2-bracteolatis. Fructus minutus.

Species ad 7, Americæ tropicæ orientalis incolæ. *Moq. in DC. Prod.* xiii. ii. 16. *Lam. Ill. t.* 182. *J. A. Schmidt in Mart. Fl. Bras.* xiv. ii. *t.* 78.

7. **Monococcus,** *F. Muell. Fragm. Phyt. Austral.* i. 46.—Flores monoici v. dioici. Perianthium 4-partitum, segmenta ♂ membranacea obtusa, ♀ herbacea acuta. Fl. ♂ : Stamina 10–20, basi perianthii inserta, filamentis brevibus subulatis basi liberis v. connatis ; antheræ dorsifixæ, lineari-oblongæ, basi longe bifidæ, extrorsum dehiscentes. Ovarii rudimentum 0 v. glanduliforme. Fl. ♀ : Staminodia 10–20, subulata. Ovarium breviter stipitatum, oblique ovoideum, 1-loculare, spinulosum ; stigma breve, crassum, recurvum, intus plumosum v. papillosum, papillis secus ovarii faciem ventralem productis ; ovulum basilare. Fructus perianthii segmentis recurvis basi stipatus, subglobosus, indehiscens, spinulis apice uncinatis dense tectus, 1-locularis, 1-spermus, pericarpio coriaceo semini adhærente. Semen erectum, subglobosum, testa membranacea albumini parco carnoso adhærente ; embryo erectus, cotyledonibus foliaceis superne replicatis, exteriore latissima basi profunde 2-loba interiorem longiorem angustiorem plicatam involvente, radicula breviuscula infera.—Frutex ramosus, fere glaber, ramulis teretibus uno latere puberulis. Folia alterna, petiolata, ovata v. ovato-lanceolata, obtusa, integerrima ; stipulæ minutæ, subulatæ. Flores parvi, in racemos terminales et axillares flexuosos dispositi, ♂ et ♀ in diversis racemis, v. ♂ in racemis ♀ subterminales pauci, pedicellis brevissimis bracteatis et 2-bracteolatis, ☿ liberis, ♀ rhachi adnatis. Fructus parvus.

Species 1, Australiæ orientalis et Novæ Caledoniæ incola. *Benth. Fl. Austral.* v. 144, *et in Hook. Ic. Pl. t.* 1077. Embryo fere *Petiveriæ*.

8. **Seguieria,** *Linn. Gen. n.* 676.—Flores hermaphroditi, racemosi. Perianthium membranaceum, 5-partitum ; segmenta subæqualia, obovata, obtusa, concava, petaloidea, fructifera immutata, reflexa. Stamina numerosa, disco hypogyno multiseriatim inserta, filamentis filiformibus carnosis ; antheræ dorsifixæ, lineares, obtusæ, basi longe 2-fidæ, versatiles, primum extrorsum dehiscentes. Ovarium stylo incluso acinaciforme, compressum, margine dorsali coriaceo, ventrali membranaceo, nucleo basali, 1-loculare, superne in stylum involutum angustatum, stigmate marginali decurrente ; ovulum basilare, campylotropum. Fructus samaroideus, nucleo globoso v. compresso lævi costato v. alato intus crustaceo, superne in alam acinaciformem venosam expansus, pericarpio semini non adhærente. Semen erectum, globosum orbiculare v. compressum, testa tenuiter coriacea, arillo 0 ; embryo annularis, albumen parcum mucosum cingens, cotyledonibus orbiculatis foliaceis basi 2-lobis complicato-convolutis, radicula gracili infera.—Frutices et suffrutices sarmentosi, glabri, ramis teretibus leviter sulcatis. Folia alterna, breviter petiolata, ovata obovata v. elliptica, subcoriacea ; stipulæ tuberculiformes v. in aculeas rectas v. decurvas mutatæ, v. 0. Flores inter minores, in racemos paniculatos axillares et terminales dispositi, gracile pedicellati, pedicellis bracteatis et 2-bracteolatis. Fructus ei *Securidacæ* simillimus.

Species 8 v. 10, Americæ tropicæ incolæ. *Moq. in DC. Prod.* xiii. ii. 6. *Benth. in Trans. Linn. Soc.* xviii. *t.* 19. *Baill. Hist. Pl.* iv. *f.* 54 *ad* 57. *J. A. Schmidt in Mart. Fl. Bras.* xiv. ii. *t.* 73.

9. **Gallesia,** *Casar. Nov. Stirp. Bras. Dec.* 43.—Flores hermaphroditi, racemosi. Perianthium herbaceum, 4-partitum ; segmenta subæqualia, obovata, concava, obtusa, fructifera aucta, erecta. Stamina perplurima, basi perianthii multiseriatim inserta, filamentis brevibus subulatis basi in annulum carnosulum connatis ; antheræ dorsifixæ, lineares, obtusæ, basi longe 2-fidæ, extrorsum dehiscentes. Ovarium stylo incluso ensiforme, basi 1-loculare, pubescens, stigmate simplici apicali ; ovulum basilare, campylotropum. Fructus samaroideus, nucleo compresso coriaceo superne in alam acinaciformem venosam expanso, pericarpio semini non adhærente. Semen erectum, orbiculare, compressum, testa tenuiter coriacea, arillo 0 ; embryo annularis, albumen parcum carnosum cingens, cotyledonibus foliaceis orbiculatis basi 2-lobis complicato-convolutis, radicula gracili infera. —Arbor elata, inflorescentia cano-puberula excepta glaberrima, odorem alliaceam spirans. Folia alterna, petiolata, ovata, acuta, coriacea ; stipulæ 0. Flores in racemos ample

paniculatos multifloros axillares et terminales dispositi, pedicellis brevibus crassis bracteatis, et 2-bracteolatis, bracteis bracteolisque ovatis obtusis pedicello appressis. **Fructus** pollicaris ei *Securidacæ* simillimus.

Species 1, Brasiliæ et Peruviæ orientalis incola. *Moq. in DC. Prod.* xiii. ii. 8. *Vell. Fl. Flum. Ic.* v. *t.* 4 (*Crateva*). *J. A. Schmidt in Mart. Fl. Bras.* xiv. ii. *t.* 74.

Tribus II. Euphytolacceæ.

10. **Phytolacca,** *Linn. Gen. n.* 588.—Flores hermaphroditi, rarius dioici v. abortu unisexuales, racemosi. Perianthium herbaceum v. subcoloratum, 4-partitum; segmenta æqualia, oblonga, obtusa, fructifera immutata, patentia v. reflexa. Stamina 5–25, basi perianthii inserta, in fl. ♀ ad staminodia parva reducta; filamentis subulatis v. filiformibus basi liberis v. connatis; antheræ dorsifixæ, oblongæ v. subglobosæ, inclusæ v. exsertæ. Ovarium globosum, e carpellis 5-12 liberis v. plus minusve connatis constans; stigmata tot quot carpella, subterminalia v. angulo ventrali inserta, subulata, erecta v. recurva, basi discreta v. connata, intus papillosa; ovula in carpellis solitaria, basifixa, campylotropa. Fructus depresso-globosus, e carpellis 5-12 liberis v. connatis carnosis dorso convexis constans. Semina reniformia, compressa, basi rostellata v. obtusa, testa crustacea atra nitida, arillo 0, endopleura membranacea; embryo annularis, albumen farinaceum cingens, cotyledonibus semiteretibus, radicula elongata ascendente hilo proxima.—Frutices, herbæ, v. raro arbores, erecti v. scandentes, glabri v. ramulis junioribus et inflorescentia furfuraceo-pubescentibus, ramis teretibus sulcatis v. angulatis. Folia alterna, sessilia v. petiolata, acuta v. obtusa, integerrima; stipulæ 0. Flores mediocres, in racemos thyrsosve contractos axillares oppositifolios et extra-alares erectos v. nutantes dispositi, pedicellis basi bracteatis et altius 2-bracteolatis. Fructus succosus, interdum intense purpureus.

Species ad 10, tropicæ et subtropicæ, pleræque Americanæ, paucæ Africæ, Asiæ orientalis, mont. Himalayæ, et Asiæ Minoris incolæ.

Sectiones sequentes, characteribus levioris momentu incertisque separatæ, nequaquam nostro sensu pro generibus distinctis retinendæ:—

1. *Euphytolacca.* Flores hermaphroditi v. abortu unisexuales. Carpella matura in baccam polyspermam connata. *Gærtn. Fruct. t.* 77. *Lam. Ill. t.* 393. *Nees, Gen. Fl. Germ.* *Baill. Hist. Pl.* v. *f.* 22 *ad* 27. *Miq. Sert. Exot. t.* 3. *L'Hér. Stirp. t.* 69. *Torr. Fl. N. York, t.* 94. *J. A. Schmidt in Mart. Fl. Bras.* xiv. ii. 343, *t.* 80. Phytolacca, *Moq. in DC. Prod.* xiii. ii. 31.

2. *Pircunia* (*Pircuniæ* sect. *Pircuniastrum*, Moq.). Flores hermaphroditi v. abortu unisexuales. Carpella matura libera v. basi tantum connata. Species 3: 1. *P. acinosa*, Roxb. (*P. Kæmpferi*, A. Gr. et *Pircunia Latbenia*, Moq.), ex Asia orientali, caule herbaceo; 2. *P. stricta*, Hoffm. in Comm. Gœtt. xii. t. 3, ex Africa australi, caule erecto ut videtur herbaceo; 3. *P. abyssinica*, Hoffm. l. c. t. 2, ex Africa tropica et Madagascaria, caule fruticoso scandente.

3. *Pseudolacca* (*Pircuniæ* sect., Moq.). Flores dioici. Species 2, altera Americæ australis extratropicæ incola, in Europa austro-occidentali et Africa boreali sæpe culta, *P. dioica*, Linn., arbor trunco basi crasso, carpellis maturis liberis. *L'Hér. Stirp. t.* 70, *J. A. Schmidt in Mart. Fl. Bras.* xiv. ii. *t.* 79 (*Pircunia*); altera Asiæ occidentalis indigena, *P. pruinosa*, Fenzl; Walp. Ann. v. 742, trunco dichotome ramoso et carpellis maturis omnino connatis.

Pircunia, nomen primum ab Endlichero propositum fuit pro speciebus carpellis maturis liberis, et *P. dioicam* cum *Anisomeria* uti sectionem *Phytolaccæ*, includit. Pircunia, *Moq. in DC. Prod.* xiii. ii. 29, pro genere proprio propositum includit sectiones *Pircuniastrum* et *Pseudolaccam* absque *Anisomeria*.

11. **Ercilla,** *Ad. Juss. in Ann. Sc. Nat. ser.* 1, xxv. 11, *t.* 3. (Bridgesia, *Hook. et Arn. in Hook. Bot. Misc.* iii. 168, *t.* 102. Apodostachys, *Turcz. in Bull. Soc. Imp. Nat. Mosc.* 1848, i. 577.)—Flores hermaphroditi, racemosi. Perianthium submembranaceum, 5-partitum; segmenta oblonga, obtusa, æqualia, fructifera immutata, erecta. Stamina 8–10, disco hypogyno inserta, filamentis filiformibus carnosis, alternis brevioribus; antheræ medio dorsifixæ, exsertæ, oblongæ, loculis fere liberis introrsum dehiscen-

tibus. Ovarium e carpellis 4–8 toro brevi insertis subglobosis constans; styli totidem, ventrales, filiformes, erecti, demum divaricati et flexuosi, intus stigmatosi; ovula in carpellis solitaria, basifixa, campylotropa. Fructus e carpellis 4–8 liberis baccatis ovoideis compressis. Semina ovoideo-reniformia, testa crustacea, arillo 0; embryo annularis, albumen farinaceum cingens, cotyledonibus semiteretibus, radicula hilo proxima.—Frutex glaberrimus, volubilis, ramulis robustis teretibus. Folia alterna, petiolata, ovato-cordata, oblonga v. rotundata, obtusa emarginata v. apiculata, crasse coriacea; stipulæ 0. Flores in spicas axillares breves sessiles densifloras cylindraceas conferti, brevissime pedicellati; pedicello basi minute bracteato, sub flore 2-bracteolato, bracteolis ovatis concavis.

Species 1, Peruviæ et Chili incola. *Moq. in DC. Prod.* xiii. ii. 84. Genus *Phytolaccæ* proximum, differt habitu, foliis coriaceis, ovario toro imposito, stylis ventralibus, bracteolis majoribus. Fructus a nobis non visus.

12. **Anisomeria,** *Don in Edinb. New Phil. Journ.* xiii. 238.—Flores hermaphroditi v. unisexuales, racemosi. Perianthium carnosum, 5-partitum; segmenta subæqualia, orbiculata, fructifera erecta, immutata. Stamina 10–30, subhypogyna, unilateralia, filamentis crassiusculis subulatis; antheræ globosæ v. breviter oblongæ, antice dehiscentes. Ovarium e carpellis 5 rarius 4–6 liberis ovoideis in stylos breves recurvos subspathulatos intus stigmatosos attenuatis; ovula in carpellis solitaria, basifixa, campylotropa. Fructus basi perianthio stipatus, e carpellis 2–4 drupaceis turgidis oblique late obovoideis compressis basi rostratis, endocarpio crasse coriaceo v. subcrustaceo. Semen erectum, reniformi-rotundatum, compressum, testa membranacea, arillo 0, endopleura tenuissima; embryo uncinatim hippocrepicus, albumen farinaceum copiosum cingens, cotyledonibus angustis planis, radicula elongata hilo proxima.—Herbæ radicibus napiformibus v. fruticuli glaberrimi crassiusculi, ramulis teretibus v. angulatis. Folia alterna, sessilia et semiamplexicaulia, v. in petiolum basi incrassatum lignosum articulata, ovata v. obovata, obtusa, integerrima, crassiuscula. Flores in spicas racemosve terminales elongatos dispositi, virides, patentes v. nutantes, pedicellis basi bracteatis et sæpius superne 2-bracteolatis.

Species 2, Chilenses. *Moq. in DC. Prod.* xiii. ii. 25. *Pœpp. et Endl. Nov. Gen. et Sp. t.* 43 *ad* 45 (*Phytolacca*).

13? **Barbeuia,** *Thou. Gen. Nov. Madagasc.* 6.—Flores hermaphroditi, racemosi. Perianthium 5-partitum; segmenta orbiculata, concava, fructifera patentia, immutata. Stamina numerosa, multiseriata, disco annulari inserta, filamentis brevibus; antheræ lineares, sagittatæ, introrsum dehiscentes. Ovarium depresso-globosum, 2-loculare; stigmata 2, lineari-oblonga, crassa, erecto-patentia, basi connata, intus et marginibus papillosa; ovula in loculis solitaria, basifixa, campylotropa. Fructus capsularis, 2-locularis, 2-spermus. Semina arillata. . . .—Frutex debilis, glaber, sarmentosus, scandens, ramulis flexuosis. Folia alterna, petiolata, ovata, integerrima, glaberrima, lucida, cum petiolo in ramulum articulata. Flores majusculi, in racemos axillares breves rigidos dispositi, rhachi racemi compressa, pedicellis alternis elongatis sub flore incrassatis.

Species 1, Madagascariensis. *Baill. Adans.* iii. 312, *t.* 6, *et Hist. Pl.* iv. *f.* 41 *ad* 43. Flores tantum a Decaisneo benevole communicatos vidimus. Descriptio fructus ex Thouarsio, l. c.

Tribus III. Gyrostemoneæ.

14. **Didymotheca,** *Hook. f. in Hook. Lond. Journ.* vi. 278; *Fl. Tasm.* i. 309, *t.* 93.—Flores dioici, in racemos foliatos dispositi. Perianthium profunde 4-lobum; lobi ovati, obtusi, fructiferi immutati, patuli. Fl. ♂: Stamina 8–10, disco inserta, filamentis brevissimis; antheræ basifixæ, lineari-oblongæ, obtusæ, rimis lateralibus dehiscentes. Ovarii rudimentum 0. Fl. ♀: Staminodia 0. Ovarium didymum, compressum, 2-loculare; stigmata 2, e basi lata subulato-lanceolata, carnosa, intus et marginibus papil-

losa; ovula in loculis solitaria, angulo interiori affixa, ascendentia, campylotropa, micropyle fungoso. Capsula didyma, compressa, coriacea, lævis, loculis suturis dorsalibus dehiscentibus. Semina reniformia, compressa, testa crustacea fusca radiatim undulata et transverse striata, arillo parvo 2-lobo, endopleura membranacea; embryo gracilis, fere annularis, albumen copiosum carnosum cingens, cotyledonibus semiteretibus, radicula elongata hilo proxima.—Herba erecta, rigidula, glaberrima, basi fruticosa, ramosissima, ramis virgatis angulatis et striatis. Folia alterna, sessilia, lineari-lanceolata, acuta, carnosula, 1-nervia, integerrima. Stipulæ minutæ. Flores parvi, virides, in axillis supremis solitarii, subsecundi, pedicellati, pedicellis 2-bracteolatis. Fructus parvus.

Species 1. Australiæ meridionalis et Tasmaniæ incola. *Benth. Fl. Austral.* v. 144. *Baill. Hist. Pl.* iv. *f.* 74 *ad* 77.

15. **Codonocarpus**, *A. Cunn.*; *Endl. Gen.* 978. (Hymenotheca, *F. Muell. Fragm. Phyt. Austral.* i. 201.)—Flores monoici v. dioici, in racemos foliatos v. nudos dispositi. Perianthium obconicum, carnosulum, ore obscure sinuato-dentato, fructiferum auctum. Fl. ♂: Stamina 10-20, circa rudimentum ovarii glanduliforme 1-seriatim inserta; filamentis brevissimis; antheræ basifixæ, lineari-oblongæ, obtusæ, basi emarginatæ, rimis lateralibus dehiscentes. Fl. ♀: Ovarium hemisphæricum v. pyriforme, e carpellis 20-50 connatis et columnæ centrali apice dilatato adnatis compressis 1-locularibus constans; stigmata tot quot carpella, libera v. basi connata, brevia, linearia, intus papillosa; ovula in loculis solitaria, angulo interiore affixa, ascendentia, campylotropa, micropyle fungoso. Fructus obconicus campanulæformis v. pyriformis, carpellis 10-20 compressissimis demum liberis et ab axi solutis membranaceis v. coriaceis, suturis ventralibus et interdum dorsalibus dehiscentibus. Semina reniformia, compressa, testa crustacea transverse rugosa, arillo parvo 2-lobo, endopleura membranacea; embryo gracilis, fere annularis, albumen parcum farinaceum cingens, cotyledonibus semiteretibus, radicula elongata hilo proxima.—Arbores v. frutices glabri, ramulis teretibus. Folia alterna, coriacea, linearia et sessilia v. petiolata et ovata v. lanceolata, integerrima; stipulæ tuberculiformes. Flores parvi, basin versus ramulorum extra-alares v. in racemos graciles axillares et terminales dispositi; pedicellis 2-bracteolatis. Fructus majusculus, basi perianthio stipatus.

Species 3, Australiæ incolæ. *Benth. Fl. Austral.* v. 147. *Desf. in Mem. Mus. Par.* viii. 116, *t.* 10 (*Gyrostemon*). *Hook. Bot. Misc.* i. *t.* 53 (*Gyrostemon, quoad carpella 2-ovulata erronea*). *Baill. Hist. Pl.* iv. *f.* 72.

16. **Gyrostemon**, *Desf. in Mem. Mus. Par.* vi. 16, *t.* 6, *et* viii. *t.* 10A. (Cyclotheca, *Moq. in DC. Prod.* xiii. ii. 37.)—Flores dioici, in racemos foliatos dispositi. Perianthium herbaceum, obconicum v. disciforme, obscure 5-7-lobum. Fl. ♂: Stamina 8-50, circa rudimentum ovarii glanduliforme 1 ∞-seriatim inserta, filamentis brevissimis; antheræ basifixæ, lineari-oblongæ v. obovoideæ, obtusæ, basi emarginatæ, rimis lateralibus dehiscentes. Fl. ♀: Staminodia 0. Ovarium globosum v. turbinatum, e carpellis 4-50 inter se liberis v. connatis columnæ centrali apice dilatatæ adnatis compressis 1-locularibus constans; stigmata tot quot carpella, basi breviter connata, subulata, intus marginibusque papillosa; ovula in loculis solitaria, angulo interiori affixa, ascendentia, campylotropa, micropyle fungoso. Fructus globoso-turbinatus, carpellis 4-50 coriaceis ab axi secedentibus suturis dorsalibus et ventralibus dehiscentibus. Semina reniformia, compressa, testa crustacea transverse rugosa, arillo parvo rugoso, endopleura membranacea; embryo fere annularis, albumen parcum farinaceum cingens, cotyledonibus semiteretibus, radicula elongata hilo proxima.—Frutices v. fruticuli glabri, ramosi, ramulis virgatis teretibus. Folia alterna, sessilia, linearia, carnosula; stipulæ tuberculiformes v. obsoletæ. Flores parvi, axillares et in racemos terminales dispositi, brevissime pedicellati, pedicellis 2-bracteolatis.

Species 3, Australiæ incolæ. *Benth. Fl. Austral.* v. 145. *F. Muell. Pl. Vict.* i. 198, *t. suppl.* 9 (*Didymotheca*). *Baill. Hist. Pl.* iv. *f.* 67 *ad* 71.

17. **Tersonia,** *Moq. in DC. Prod.* xiii. ii. 40 (*quoad pl.* ♀).—Flores dioici, racemosi, ♀ solitarii. Perianthium disciforme, carnosulum, obscure sinuato-dentatum. Fl. ♂: Stamina 8–14, circa rudimentum ovarii glanduliforme 1-seriatim inserta, filamentis brevissimis; antheræ basifixæ, lineari-cuneatæ, basi emarginatæ, rimis lateralibus dehiscentes. Fl. ♀: Staminodia 0. Ovarium globosum, concentrice zonatum, e carpellis perplurimis arcte connatis et columnæ centrali apice discoideo-dilatatæ adnatis constans; stigmata tot quot carpella, circa discum ad apicem columnæ radiantia, intus papillosa; ovula in carpellis solitaria, angulo interiore inserta, ascendentia, campylotropa, micropyle fungosa. Fructus globosus, lignosus, tuberculatus, apice umbilicatus, multilocularis, loculis indehiscentibus 1-spermis. Semina minuta, erecta, cylindracea, obtusa, testa tenuiter crustacea obscure transverse rugosa, arillo turbinato, endopleura membranacea; embryo uncinatus, albumen parcum carnosum (interdum deficiens) cingens, cotyledonibus angustis planis, radicula hilo proxima.—Frutex glaber, ramosus, decumbens, ramis ascendentibus. Folia alterna, linearia, teretia, carnosula; stipulæ tuberculiformes. Flores parvi, 2-bracteolati, ♂ racemis spicisve nudis laxifloris bracteati, ♀ sessiles. Fructus diametro nucis avellanæ, perianthio parvulo stipatus.

Species 1, Australiæ austro-occidentalis incola. *Benth. Fl. Austral.* v. 149.

GENERA ANOMALA.

18. **Stegnosperma,** *Benth. Bot. Sulph. Voy.* 17, *t.* 12.—Flores hermaphroditi, racemosi. Calyx 5-partitus, carnosus; segmenta oblonga, obtusa, imbricata, fructifera aucta, suberecta. Petala 5, membranacea, obovato-orbiculata, calyce breviora, in alabastro imbricata. Stamina 10, filamentis subulatis basi in annulum perigynum connatis, 5 calycis lobis alterna majora; antheræ dorsifixæ, late oblongæ, basi 2-fidæ, loculis introrsum dehiscentibus. Ovarium sessile, globoso-ovoideum, 1-loculare, loculo columna centrali percurso: stigmata 3–5, brevia, subulata, recurva, intus papillosa, basi connata; ovula tot quot stigmata, basilaria, erecta, amphitropa. Capsula globosa, coriacea, 5- rarius 3–4-gona, angulis costatis, 1-locularis, usque ad basin 5-valvis, 1–5-sperma, valvis intus carinatis. Semina erecta, arillo amplo carnoso albo apice pervio inclusa, obovoidea, subrostellata, testa crasse coriacea atra nitida, endopleura membranacea; embryo . . . .—Frutex ramosissimus, erectus, glaucus, ramulis teretibus. Folia alterna, breviter petiolata, ovata obovata v. elliptica, obtusa, integerrima, coriacea v. carnosula; stipulæ 0. Flores majusculi, in racemos terminales pedunculatos dispositi, roseo-virescentes, pedicellis crassiusculis basi bracteatis et 2-bracteolatis.

Species 1, Californiæ australis, Americæ centralis, et insularum Cubæ et St. Domingi incola. *Moq. in DC. Prod.* xiii. ii. 35. *A. Rich. Fl. Cub. t.* 44 *ter.*

19. **Agdestis,** *Moç. et Sessé, Fl. Mexic. ined. ex DC. Syst. Veg.* i. 543; *Prod.* i. 103.—Flores hermaphroditi, racemosi. Perianthium semisuperum, 4–5-partitum; segmenta membranacea, oblonga, obtusa, patentia, fructifera stellatim expansa, aucta, reticulatim venosa. Stamina numerosa, disco perigyno ad basin segmentorum perianthii pluriseriatim inserta, filamentis filiformibus; antheræ dorsifixæ, lineari-oblongæ, basi et apice 2-fidæ, loculis rimis lateralibus dehiscentibus. Ovarium semi-inferum, turbinatum, 3- rarius 4-loculare; stylus conico-subulatus stigmatibus 3 rarius 4 elongatis intus et apice papillosis; ovula in loculis solitaria, basilaria, semi-anatropa. Fructus inferus, turbinatus, perianthii segmentis alatus, 1-locularis, 1-spermus, pericarpio coriaceo semini adhærente. Semen sessile, globosum, testa crustacea fusca, arillo 0, endocarpio tenui; embryo annularis, albumen parcum farinaceum cingens, cotyledonibus late oblongis subfoliaceis obtusis radicula brevi infera multo latioribus.—Herba gracillima, glaberrima, volubilis, radice napiformi. Folia alterna, petiolata, cordato-rotundata, apiculata, membranacea, integerrima. Flores mediocres, in racemos paniculatos longe pedunculatos axillares dispositi, pedicellati, albi, rhachi pedicellisque filiformibus bracteatis et 2-bracteolatis.

Species 1, Mexici borealis incola. *Baill. Hist. Pl.* iv. *fig.* 44. *Griseb. Pfl. Trop. Amer.* 5.

Ordo CXXXIII. **BATIDEÆ.**

Lindl. Veg. Kingd. 286. Endl. Gen. 1327 (Genera incertæ sedis).

Flores dioici, in strobilos axillares dispositi. Fl. ♂: *Strobilus* sessilis; squamæ liberæ, 4-fariam arcte imbricatæ, 1-floræ, persistentes. *Perianthium* cyathiforme, a dorso compressum, antice convexum, postice planum, supra medium transverse 2-lobum; lobi truncati, postico (superiore) majore subacuto anticum angustiorem truncatum in æstivatione obtegente. *Stamina* 4, ima basi perianthii inserta; filamenta crassiuscula, staminodiis totidem alternantia. *Antheræ* dorso insertæ, magnæ, oblongæ, 2-loculares; loculi infra medium distincti, introrsum dehiscentes; pollen globosum. *Staminodia* inter filamenta inserta, unguiculata, ungue gracili elongato; lamina ovato-rotundata, membranacea, dentata. *Discus* et ovarii rudimentum 0. Fl. ♀: *Strobilus* pedunculatus, ovoideo-oblongus, 4-12-florus; squamæ basin versus strobili decussatim oppositæ, parvæ, orbiculatæ, deciduæ. *Perianthium* 0. *Stamina* et *staminodia* 0. *Ovaria* ovoideo-oblonga, in syncarpium carnosum connata, apicibus stigmatiferis liberis, singula 4-locularia. *Stylus* 0; stigma sessile, pulvinatum, obscure 2-lobum, lobis axi lateralibus. *Ovula* in loculis solitaria, erecta, funiculo basilari brevi, anatropa, raphe ventrali. *Fructus*, syncarpium ovoideo-oblongum, carnosum, stigmatibus tot quot ovaria persistentibus; loculis quaternis, endocarpio coriaceo. *Semina* erecta, clavata, leviter curva, testa membranacea; albumen 0. *Embryo* semini conformis; cotyledones magnæ, oblongæ, plano-convexæ; radicula brevis, conica, infera.

Frutex maritimus, glaber, erectus, ramosus, habitu *Suædæ*, ramis oppositis ascendentibus. Folia opposita, sessilia, carnosula, linearia v. lineari-oblonga, obtusa v. subacuta, semiteretia, integerrima. Stipulæ 0. Strobili solitarii et in ramos foliis orbatos paniculatim spicati.

Species 1, Americæ tropicæ a Florida ad Brasiliam incola, nec non in California et insulis Sandvicensibus obvia.

1. **Batis**, *Linn. Gen. n.* 1104.—Genus unicum. Character ordinis.

Species 1, uti supra. *A. DC. Prod.* xvii. 35. *Torr. Obs. Batis in Smiths. Contrib.* vi. *t.* 11, *ic. opt.*, *in Schnitzl. Ic. Fam. Nat. t.* 241* *repetita*. *Lemaout et Dcne. Trait. Bot.* 453, *cum ic.* *Tison in Baill. Dict. Bot.* i. 382.

Genus nulli arcte affine, habitu et floribus ♂ *Chenopodiaceis* accedit, ovario pluriloculari *Phytolaccaceis*, seminibus *Illecebraceis*, ab omnibus tamen notis essentialibus differt. Ovarii rudimentum in fl. ♂ a Decaisneo in Bull. Soc. Bot. Fr. v. 48 memoratum nunquam vidimus, quod etiam a Torreyo negatur. Petala in Prodromo cum illis (perianthii segmentis) *Empetracearum* comparata, nobis et situ et structura omnino staminodiis *Amarantacearum* homologa videntur.

Ordo CXXXIV. **POLYGONACEÆ.**

Endl. Gen. 304. Lindl. Veg. Kingd. 502.

Flores hermaphroditi, v. in paucis generibus unisexuales, regulares. *Perianthium* inferum, calycinum v. coloratum, lobis segmentisve 4–6, 1–2-seriatim imbricatis æqualibus v. seriei exterioris v. interioris minoribus, post anthesin immutatis v. exterioribus v. interioribus circa fructum accretis. *Stamina* 6–9, rarius pauciora v. indefinite plura, infra lobos v. ad basin perianthii 1-seriatim v. sub-2-seriatim affixa, rarius in flore ♂ in disco centrali conferta; filamenta filiformia v. basi dilatata, libera v. basi in annulum connata. *Antheræ* 2-loculares, sæpius versatiles, loculis discretis parallelis v. subparallelis, connectivo parvo v. rarius longiore v. latiore dorso connexis, rimis longitudi-

nalibus dehiscentibus. *Discus* annularis sæpe adest ad basin perianthii, integer v. crenis v. dentibus tot quot stamina iisque alternis instructus. *Ovarium* superum, sessile v. rarius basi breviter perianthio adnatum, 3-gonum v. compressum, rarissime 4-gonum, 1-loculare. *Styli* 3, 2 v. rarissime 4, ad apicem ovarii distincti v. basi connati, nunc brevissimi; apice in stigmata capitata peltata v. varie expansa v. fimbriata dilatati. *Ovulum* unicum, orthotropum, sessile v. ad apicem funiculi plus minus elongati erectum, v. funiculo apice recurvo pendulum. *Fructus* nuceus, indehiscens, 3-gonus compressus v. rarius 4-gonus, perianthio immutato v. varie aucto inclusus velatus v. vestitus, rarius e perianthio marcescente exsertus; pericarpium crustaceum v. rarius coriaceum v. induratum. *Semen* in loculo erectum, sessile v. breviter stipitatum, pericarpio conforme nisi minus angulatum, interdum sulcis longitudinalibus profundis 3–6-lobum; testa membranacea; albumen copiosum, farinosum, semen implens, æquabile v. ruminatum. *Embryo* sæpius plus minus excentricus v. lateralis, varie curvus v. rectus interdum periphericus; cotyledones planiusculæ, angustæ v. latæ, rarius latissimæ convolutæque; radicula longa v. brevis, supera v. ascendens.

Herbæ frutices v. interdum arbores. Folia alterna v. rarius opposita, forma varia, rarius lobata v. divisa nec unquam composita, petiolo sæpius basi plus minus dilatato amplexicauli, ibidemque sæpe membranaceo-marginato, margine cum ocrea stipulina membranaceo-scariosa intrapetiolari caulem vaginantem continuo, folio delapso cicatricem annularem sæpius relinquente. Flores sæpius parvuli, intra bracteam cupulatam ocreiformem v. apertam v. involucrum 4–6-fidum solitarii v. sæpius fasciculati, fasciculis axillaribus v. in dichotomiis caulis v. secus rhachin spicæ v. racemi dispositis. Pedicelli sæpissime articulati.

Species ad 600, per orbem fere totum dispersæ, arborescentes fere omnes Americæ tropicæ incolæ, herbaceæ in regionibus temperatis v. montanis frequentiores, fruticosæ plurimæ ad regionem orientali-Mediterraneam v. Asiam occidentalem limitatæ.

Ordo distinctissimus, a cæteris Curvembryis facillime dignoscitur habitu, ocreis, perianthio, staminum situ, ovulo orthotropo, radicula supera, aliisque notis, et nulli alii ordini arcte approximatur.

FORMÆ ABNORMES.

Folia opposita v. verticillata in speciebus paucis *Eriogoni*, in *Lastarriæa*, *Chorizanthe*, *Pterostegia* et interdum in *Kœnigia*.

Stamina numerosa in *Calligono* et *Symmeria*, disco centrali nec perianthio affixa in floribus ♂ *Ruprechtiæ* et *Symmeriæ*.

Pistillum 4-merum in *Calligono*.

Ovulum funiculo summo apice recurvo pendulum in *Antigono*, *Brunnichia* et *Leptogono*. Funiculus pariter elongatus sed ovulum erectum in speciebus pluribus *Polygoni* aliisque nonnullis.

Perianthii fructiferi tubus supra nucem perfecte clausus v. solidus in *Oxygono*, *Emice* et *Symmeria*, carnosus v. bacciformis in *Coccolobo*, *Muehlenbeckia* et in *Polygoni* speciebus paucis e sectionibus *Cephalophilo* et *Aconogono*, nuci adnatus in speciebus pluribus *Coccolobi*.

CONSPECTUS GENERUM.

Tribus I. Eriogoneæ. Herbæ suffruticesve, foliis radicalibus v. infra inflorescentiam paucis, petiolo basi parum dilatato, ocrea nulla. Inflorescentia dichotome v. umbellatim ramosa, foliis floralibus seu bracteis sub ramis in unam 3-fidam connatis v. 3–∞-liberis. Involucrum tubulosum v. cupulatum, 4–8-dentatum v. lobatum, flores 1–∞-includens. Flores sæpius 6-meri 9-andri. Genera omnia Americana.

1. Eriogonum. Involucra 3–8-dentata, ∞-flora, floribus sæpissime exsertis.—*Amer. bor.*, *Mexico*.

2. Oxytheca. Involucra 4-fida, lobis aristatis, pauciflora, floribus sæpius inclusis.—*California*, *Chili*.

3. Centrostegia. Involucra tubulosa, 3–6-dentata, extus divaricato-calcarata, 2–4-flora.—*California*.

4. Chorizanthe. Involucra tubulosa v. infundibularia, 2–6-dentata, constanter 1-flora.—*California*, *Chili*.

Tribus II. Kœnigieæ. Herbæ humiles v. teneræ, foliis infra inflorescentiam alternis v. oppositis basi leviter dilatatis amplexicaulibus v. in vaginam brevissimam connatis, ocreis 0 v. obscuris. Inflorescentia dichotoma v. subumbellata, foliis floralibus sub ramis liberis v. subconnatis. Flores ad dichotomias capitati v. dense fasciculati, singuli bractea stipati. Perianthii lobi 6 v. pauciores, staminibus totidem v. paucioribus. Genera Americana v. borealia.

5. HOLLISTERIA. Bracteæ ovatæ, utrinque dense lanatæ. Perianthium lanatum, 5–6-fidum. Stamina 5–6.—*California.*

6. NEMACAULIS. Bracteæ ovatæ, extus nudæ, intus dense lanatæ. Perianthium glabrum, 6-fidum. Stamina 2–3.—*California.*

7. LASTARRIÆA. Perianthii dentes 6, uti folia floralia et bracteæ angusti, rigidi, recurvo-cuspidati. Stamina 3.—*Chili, California.*

8. PTEROSTEGIA. Bracteæ post anthesin valde auctæ, latæ, membranaceo-scariosæ, venosæ, dorso sæpe 2-alatæ v. 2-cristatæ. Herba tenera, foliis oppositis orbiculatis v, late 2-lobis. Perianthii lobi et stamina 6, rarius 5.—*California.*

9. KŒNIGIA. Bracteæ hyalinæ, pedicello breviores. Herbæ nanæ, teneræ, foliis alternis oppositisve parvis. Perianthii lobi et stamina sæpius 3 rarius 2 v. 4.—*Reg. arct. et subarct. Americæ et orbis veteris, mont. Asiæ.*

Tribus III. Eupolygoneæ. Herbæ suffruticesve, caule rarius volubili, v. frutices ramosissimi, foliis alternis, ocreis membranaceo-scariosis. Flores ad axillas v. ad nodos inflorescentiæ fasciculati, fasciculis, rarius floribus singulis, bractea vaginante v. concava stipatis. Perianthium 5-merum rarius 4-merum. Stamina 6–8 v. subinde pauciora (excepto *Calligono*). Styli sæpius filiformes; stigmata capitata (excepta *Polygoni* sectione *Pleuroptero*). Albumen integrum, æquabile.

10. CALLIGONUM. Stamina 12–18. Pistillum 4-merum. Nux in ordine majuscula, exserta, varie angulata alata v. muricata. Frutices ramosissimi, foliis angustis v. parvis.—*Asia occid. et med., Afric. bor.*

11. PTEROPYRUM. Stamina 8. Pistillum 3-merum. Nux exserta, 3-alata, alis supra medium interruptis. Frutices rigide ramosi, foliis parvis linearibus v. spathulatis.—*Oriens.*

12. ATRAPHAXIS. Stamina sæpius 6–8. Pistillum 2–3-merum. Nux perianthio aucto scarioso inclusa. Frutices ramosissimi, sæpe spinescentes, foliis angustis v. parvulis.—*Asia med. et occid. Afr. bor.*

13. OXYGONUM. Stamina 8. Pistillum 3-merum. Nux perianthii tubo 3-gono 3-alato v. 3-calcarato arcte inclusa, limbo marcescente coronata. Herbæ, foliis integris sinuato-dentatis v. pinnatifidis.—*Afr. or. trop. et austr.*

14. POLYGONELLA. Stamina 8. Pistillum 3-merum. Perianthii fructiferi segmenta 2 exteriora parva reflexa, 3 interiora erecta nucem includentia. Herbæ tenues, erectæ, foliis anguste linearibus, racemis spiciformibus gracilibus paniculatis.—*Amer. bor.*

15. POLYGONUM. Stamina 8 v. subinde pauciora. Pistillum 3-merum. Perianthium fructiferum parum auctum, nucem includens, membranaceum v. interdum baccatum, segmentis æqualibus v. 3 exterioribus majoribus interdum carinatis v. alatis. Herbæ rarius suffrutices, habitu polymorpho.—*Orbis fere totus.*

16. FAGOPYRUM. Omnia *Polygoni* nuce excepta perianthio longiore et cotyledonibus latissimis contortis plicatis radiculam involventibus. Herbæ cymis laxe corymbosis v. in capitulum contractis.—*Asia? ibidem et in Eur. cult. et inquilinum.*

(Vide etiam 21, *Muehlenbeckiam*, cujus species nonnullæ *Polygono* accedunt.)

Tribus IV. Rumiceæ. Herbæ, rarius suffrutices v. frutices ramosi, foliis alternis v. radicalibus, ocreis membranaceo-scariosis. Flores ad axillas v. ad nodos inflorescentiæ fasciculati, fasciculis bractea vaginante v. concava stipatis. Perianthium 6-merum v. rarius 4-merum. Stamina 9 v. 6, rarissime subinde pauciora. Styli breves. recurvo-patentes, in stigmata late hippocrepica peltata v. fimbriata dilatati. Albumen integrum, æquabile.

17. RHEUM. Stamina 9 rarius 6. Perianthium 6-merum, fructiferum immutatum marcescens. Nux exserta, 3-alata. Herbæ robustæ.—*Asia med. et or.*

18. OXYRIA. Stamina 6. Perianthium 4-merum, fructiferi segmenta exteriora reflexa, interiora nuci 2-alatæ appressa. Herbæ humiles v. tenues, foliis radicalibus.—*Reg. arct. et mont. elatiores Eur. Asiæ et Amer. bor.*

19. Rumex. Stamina 6. Perianthium 6-merum, rarius 4-merum, fructiferi segmenta exteriora immutata, interiora valde aucta, erecta, nucem 3-gonam exalatam includentia. Herbæ habitu vario, rarius frutices.—*Orbis fere totus.*

20. Emex. Flores monoici, ♂: Stamina 4–6. Fl. ♀: Perianthium 6-merum, fructiferi aucti indurati tubus angulatus nucem arcte includens, limbus persistens, lobis exterioribus patentibus spinescentibus, interioribus erectis planis. Herbæ rigidulæ, foliatæ.—*Reg. Mediterr.*, *Afr. austr.*, *Australia.*

(Vide etiam 15, *Polygoni* sect. *Pleuropteram*, stigmatibus fimbriatis.)

Tribus V. Coccolobeæ. Arbores, frutices v. rarius suffrutices, caule sæpe scandente, foliis alternis, ocreis variis sæpe brevissimis v. fere obsoletis. Flores ad axillas v. secus rhachin inflorescentiæ intra bracteam vaginantem v. concavam fasciculati, rarius solitarii. Perianthium 5-merum. Stamina 8 v. subinde pauciora. Stigmata varia. Albumen sulcis longitudinalibus 3–6-lobum, sæpissimeque ruminatum.

21. Muehlenbeckia. Frutices suffruticesve, sæpe volubiles, floribus sæpius polygamo-dioicis. Perianthium fructiferum basi v. undique carnosum v. baccatum, nuce inclusa v. apice exserta. Albumen quam in sequentibus minus ruminatum.—*Australia*, *Nov. Zel.*, *ins. Pacif.*, *Amer. austr. extratrop. et Andin.*

22. Coccoloba. Arbores fruticesve, sæpe alto scandentes, floribus hermaphroditis. Perianthii fructiferi tubus carnosus v. baccatus, nucem includens eique sæpe adnatus, limbo immutato connivente v. marcescente coronatus.—*Amer. trop.*, *Mexico*, *Florida.*

23. Campderia. Arbores fruticesve. Perianthium fructiferum auctum nucem includens, segmentis coriaceis exterioribus carinatis.—*Mexico*, *Amer. centr.*, *Bras. bor.*

24. Antigonon. Caules a basi frutescente alto scandentes; inflorescentia cirrhifera. Perianthium fructiferum auctum, membranaceo-scariosum, coloratum, segmentis exterioribus majoribus late cordatis, interioribus oblongis. Ovulum ex apice funiculi pendulum, demum erectum.—*Mexico*, *Amer. centr.*

25. Brunnichia. Frutex scandens, inflorescentia cirrhifera. Perianthium fructiferum auctum, oblongo-conicum, coriaceum, lobis conniventibus subæqualibus, basi in alam coriaceam secus pedicellum unilateralem productum. Ovulum *Antigoni.*—*Amer. bor.*

Tribus VI. Triplarideæ. Arbores fruticesve non scandentes, foliis alternis, ocreis sæpius brevissimis v. obsoletis. Flores secus rhachin inflorescentiæ intra bracteam vaginantem v. spathaceam solitarii v. fasciculati. Perianthium 6-merum. Stamina 3, 6, 9 v. ∞. Stigmata varia. Albumen sulcis longitudinalibus 3–6-lobum, ruminatum.

* *Flores hermaphroditi.*

26. Leptogonum. Perianthium angustum, lobis linearibus exalatis, interioribus minoribus. Stamina 3. Ovarium globosum, obtuse 3-gonum. Ovulum ab apice funiculi pendulum.—*San Domingo.*

27. Podopterus. Perianthii segmenta exteriora ala lata scariosa carinata. Stamina 6. Ovarium 3-gonum. Ovulum erectum.—*Mexico.*

** *Flores dioici.*

28. Triplaris. Perianthium ♂ infundibulare. Stamina ∞, ad apicem tubi affixa. Perianthium ♀ fructiferum basi ovoideum nucem includens, lobis 3 exterioribus valde accretis oblongis alæformibus membranaceo-scariosis venosis. Nux acute 3-gona, faciebus planis.—*Amer. austr. trop.*

29. Ruprechtia. Perianthium ♂ 6-partitum. Stamina 9, disco centrali ad basin perianthii affixa. Perianthium ♀ fructiferum nunc *Triplaris*, nunc segmentis exterioribus oblongis subcoriaceis aveniis. Nux basi incrassata, 3–6-sulcata, angulis obtusis.—*Amer. austr. trop. et subtrop.*

30. Symmeria. Perianthium ♂ 6-partitum. Stamina ultra 20 in disco centrali densissime conferta. Perianthium ♀ fructiferum pyramidatum, acute 3-gonum, suberoso-carnosum, circa supra nucem acute 3-gonam solidum, apice breviter 3-lobum.—*Guiana*, *Bras. bor.*, *Senegambi*

Tribus I. Eriogoneæ.*

1. **Eriogonum**, *Mich. Fl. Bor. Amer.* i. 246, *t.* 24. (Espinosa, *Lag. Gen. et Sp. Pl. Nov.* 14, *ex char. brevi.*)—Involucrum campanulatum turbinatum v. cylindraceum, 5–8-dentatum v. lobatum. Flores in involucro ∞, v. rarissime casu solitarii, per anthesin ex involucro exserti. Perianthium 6-partitum v. alte 6-fidum, segmentis post anthesin sæpe auctis æqualibus v. exterioribus majoribus rarissime brevioribus. Stamina 9, basi perianthii v. altius affixa, filamentis filiformibus basi sæpe pilosis. Ovarium 3-quetrum; styli 3, breviter v. longiuscule filiformes, apice capitato-stigmatosi. Nux perianthio persistente obtecta, 3-quetra interdum 3-alata. Embryo nunc in medio albumine fere rectus, nunc excentricus v. fere lateralis incurvus, radicula tunc accumbenti-ascendente cotyledonibus longiore.—Herbæ suffruticesve cæspitosi v. annuæ tenuesque, lana densa brevi subfloccosa v. tomento incano præsertim ad basin caulis et in pagina inferiore foliorum rarius omnino deficiente. Folia ad basin caulis conferta subradicalia, v. in caule infra inflorescentiam pauca, alterna, integerrima, petiolo ima basi plus minus dilatata amplexicaulia, ocrea 0 v. obscura. Pedunculi v. rami floriferi a collo scapiformes v. in caule axillares terminalesque interdum apice involucrum unicum ferentes, sæpissime tamen in ramos 2–∞ semel v. repetite 2–3-chotomos v. umbellatos divisi. Bracteæ sub inflorescentiæ ramificationibus tot quot rami, basi sæpe connatæ, nunc brevissimæ adpressæ v. patentes, nunc in folia expansæ, nunc membranaceæ stipuliformes et interdum folia foventes intra bracteas sub involucro sessili oriunda. Umbellæ v. generales v. partiales interdum in capitula contractæ. Involucra solitaria v. complura capitata, intra bracteas 2 sessilia v. pedicellata, in inflorescentia dichotoma alaria v. terminalia, v. ramo altero dichotomiæ abortiente secus ramos paniculæ unilateraliter dissitæ. Bracteolæ intra involucrum inter pedicellos sæpe numerosæ tenerrimæ v. setaceæ, interdum perpaucæ v. 0.

Species notæ fere 100, Americæ borealis imprimis occidentalis incolæ, paucis usque ad Mexicum extensis. *Benth. in DC. Prod.* xiv. 5. *Torr. et Gray in Proc. Amer. Acad.* viii. 146. *S. Wats. in Proc. Amer. Acad.* xii. 254, xiv. 295, *et Bot. Calif.* ii. 16. *ined.*

Genus post Prodromum numero specierum valde accretum a Torrey et Gray l. c. reformatum et in series 14 divisum, imprimis ad habitum et inflorescentiam, partim etiam ex nuce angulata v. 3-alata v. ad embryonem axilem rectumque v. excentricum et curvulum. S. Watson nuperius sectiones tres primarias proposuit sat naturales, etsi præcipue ad involucra et bracteas definita sint.

1. *Eueriogonum.* Involucra turbinata, sæpius 2-linearia v. longiora (rarius minima), nec costata nec angulata, 4–8-dentata v. lobata. Bracteæ foliaceæ 2. 5 v. ∞, rarius subternæ. Species pleræque perennes. *Nutt. in Journ. Acad. Philad.* vii. *t.* 8, *f.* 2. *Hook. Fl. Bor. Amer. t.* 175 *ad* 177 *et in Kew Journ. Bot.* v. *t.* 10. *Benth. in Trans. Linn. Soc.* xvii. *t.* 18, *f.* 2. *A Gray, Bot. Amer. Expl. Exped.* ii. *t.* 14 B. *Torr. Bot. Sitgr. Exped. t.* 8, 11, 12; *Bot. Whipple Exped. t.* 19.

Stenogonum, *Nutt. in Journ. Acad. Philad. ser.* 2. i. 170. est *E. salsuginosum*, Hook., species humilis ramosissima, ad *Eueriogonum* relata, etsi flores ex involucro minimo vix exserentur.

2. *Ganysma.* Involucra campanulata v. breviter turbinata, nec costata nec angulata, dentibus 5 rotundatis erectis, in paniculis repetite 2–3-chotomis pedunculata. Bracteæ parvæ, ternatæ, non foliatæ, sæpius triangulares rigidæque. Flores basi non attenuati. Species pleræque annuæ.—*Benth. in Trans. Linn. Soc.* xvii. *t.* 18, *f.* 1. *S. Wats. Bot.* 40 *Parall. t.* 33.

3. *Oregonium.* Involucra cylindraceo-turbinata, 5–6-nervia, sæpius costata v. angulata, breviter dentata, capitata fasciculata v. secus ramos virgatos paniculæ sparsa, semper erecta, 1–3 lin. longa. Bracteæ ternatæ, basi connatæ, sæpius breves rigidæque. Flores basi non attenuati. Species pleræque perennes.—*Benth. Bot. Sulph. t.* 22. *A. Gray, Bot. Amer. Expl. Exped.* ii. *t.* 14 A. *Dur. Bot. Williamson Exped. t.* 15 *ad* 17. *Torr. Bot. Sitgr. Exped. t* 9, 10.

Eucycla, *Nutt. in Journ. Acad. Philad. ser.* 2, i. 166, est *E. ovalifolium*, Nutt. in Journ Acad. Philad. vii. t. 7 ad t. 8, f. 1, species a cæteris parum distincta perianthii segmentis utriusque seriei magis disparibus.

2. **Oxytheca**, *Nutt. in Journ. Acad. Philad. ser.* 2 i. 169. (**Brisegnoa**, *Remy in C. Gay, Fl. Chil.* v. 291.)—**Involucrum turbinato-campanulatum, tubo brevi, lobis 4 spinuloso-**

aristatis. Flores in involucro ∞, pedicellati at subinclusi. Perianthium 6-fidum, lobis subæqualibus. Stamina 9, basi perianthii affixa. Ovarium ovoideum v. oblongum, obscure 3-quetrum; styli 3, breves, apice capitato-stigmatosi. Nux compressa. Embryo excentricus, incurvus, cotyledonibus latis, radicula longa accumbenti-ascendente.—Herbæ annuæ, humiles. Folia radicalia rosulata, lineari-spathulata. Rami floriferi e collo erecti, repetite dichotomi, demum interdum valde accreti et undique intricato-ramosissimi. Bracteæ ad dichotomias 3, nunc parvæ distinctæque, nunc in unam latam perfoliatam aristato-3-lobam coalitæ. Involucra ad dichotomias solitaria, nunc minima longe pedicellata, nunc inter bracteolas sessilia v. subsessilia.

Species 5, Californicæ, quarum una etiam in Chili obvia. *S. Wats. Bot. Calif.* ii. 32 *ined.*, *et Bot.* 40 *Parall. t.* 33, 34. *Miers in Trans. Linn. Soc.* xxi. 144, *t.* 17.

3. **Centrostegia**, *A. Gray in Torr. Bot. Parke Exped.* 19, *t.* 8.—Involucrum tubulosum v. infundibuliforme, apice 3–6-dentatum v. lobatum, dentibus rectis sæpius aristatis, extus basin versus calcaribus totidem acutis aristatisve divaricatis instructum. Flores in involucro 2–3 (rarius solitarii?), pedicellati at inclusi v. vix exserti. Perianthium 6-partitum, segmentis angustis subæqualibus. Stamina 9, basi perianthii affixa. Ovarium 3-quetrum; styli 3, filiformes, apice capitato-stigmatosi. Nux triquetra. Embryo excentricus, incurvus, cotyledonibus latis, radicula elongata accumbenti-ascendente.—Herbæ annuæ, pusillæ, glabræ v. vix puberulæ nec lanatæ. Folia radicalia rosulata, lineari-spathulata. Rami floriferi e collo erecti, repetite dichotomi. Bracteæ sub dichotomiis 3-partitæ v. 3-fidæ. Involucra ad dichotomias solitaria v. pauca, ad apices ramulorum sæpe plura subcapitata. Bracteolæ intra involucrum 0.

Species 2, Californicæ, *Torr. et Gr. in Proc. Amer. Acad.* viii. 192.

Genus quasi medium tenet inter *Eriogonum* et *Chorizanthem*, a S. Wats. in Proc. Amer. Acad. xii. 269 huic adjunctum. In *Chorizanthe* tamen involucra constanter 1-flora et calcaria a S. Watsonio in *C. commissurali* e Chile observata rarissima videntur, nam in specimine nostro desunt nec a C. Gayo memorantur.

4. **Chorizanthe**, *R. Br.*; *Benth. in Trans. Linn. Soc.* xvii. 416, *t.* 19.—Involucrum tubulosum v. infundibuliforme, apice 2–6-dentatum, dentibus acutis aristatisve divaricatis v. rarius erectis basi interdum scarioso-dilatatis. Flos in involucro unicus, sessilis v. pedicellatus, inclusus v. vix exsertus. Perianthium 6-fidum v. 6-partitum, segmentis sæpius æqualibus. Stamina 9, rarius 3–6, basi v. ad faucem perianthii affixa. Ovarium ovoideum v. oblongum; styli 3, filiformes, apice capitato-stigmatosi. Nux 3-gona. Embryo nunc axilis rectus cotyledonibus angustis, nunc excentricus incurvus cotyledonibus latis, radicula elongata accumbenti-ascendente.—Herbæ suffruticesve glabræ pubescentes v. sericeo-villosæ, nec lanatæ. Folia sæpius angusta, radicalia rosulata, in parte inferiore caulis opposita v. verticillata. Rami floriferi erecti dichotomi v. primarii rarius umbellati. Bracteæ ad dichotomias 3, sæpe in unam 3-fidam connatæ, v. sub umbella plures. Involucra ad dichotomias solitaria v. pauca, summa tamen v. interdum inflorescentia tota in cymam densam capitulumve terminale conferta, singula basi sæpe demum indurata, calcarata tamen adhuc non vidimus.

Species ad 30, quarum 8 Chilenses perennes v. suffrutescentes cum una annua, *Benth. in DC. Prod.* xiv. 24; cæteræ omnes annuæ Californicæ, *Torr. et Gray in Proc. Amer. Acad.* viii. 192, ubi in sectiones 3 sequentes distribuuntur.

1. *Euchorizanthe.* Involucrum 6-dentatum, 6-costatum. Stamina juxta basin perianthii affixa. Huc pertinent species Chilenses cum plerisque Californicis. CHORIZANTHE, *Benth. l.c.*, *Torr. Bot. Williamson Exped. t.* 8.

2. *Mucronea.* Involucrum 2–4-dentatum. Stamina juxta basin perianthii affixa. Bracteæ ad dichotomias in unam latam 3-fidam interdum perfoliatam connatæ. Species 2, Californicæ. MUCRONEA, *Benth. in Trans. Linn. Soc.* xvii. 419, *t.* 20.

3. *Acanthogonum.* Involucrum 3–5-dentatum, transverse corrugatum. Stamina fauci perianthii breviter 6-lobi affixa. Species 2, Californicæ. *S. Wats. Bot.* 40 *Parall. t.* 34. ACANTHOGONUM, *Torr. Bot. Whipple Exped.* 132 (76).

TRIBUS II. KŒNIGIEÆ.

5. **Hollisteria,** *S. Wats. in Proc. Amer. Acad.* xiv. 296.—Flores glomerati, singuli bractea ovata bracteolisque lanceolatis stipati, undique lana nivea involuti. Perianthium lanatum, 5–6-fidum, tubo intus subincrassato, lobis patentibus angustis æqualibus v. alternis minoribus. Stamina 5–9, infra (v. supra ?) medium perianthii affixa, filamentis filiformibus. Ovarium ovoideum; styli 3, filiformes, apice capitato-stigmatosi. Nux obtuse 3-quetra, acuminata. Embryo excentricus, incurvus, cotyledonibus orbiculatis, radicula elongata accumbenti-ascendente.—Herba dichotome ramosa ad articulationes demum fragilissima, undique albo-lanata. Folia alterna, ovata, membranacea, lanata. Stipulæ laterales, subfoliaceæ, lineari-acuminatæ, a petiolo distinctæ. Florum glomeruli in dichotomiis sessiles, inferiores 2–3-flori (superiores ∞-flori ?). Flores parvi, lanati, bracteas non superantes.

Species 1, Californica. Genus evidenter *Nemacauli* valde affine, nobis notum e fragmentis fragilibus partis superioris inflorescentiæ et specimine juniore ineunte florescentia nuper cum notis Grayi et S. Watsoni accepto.

6. **Nemacaulis,** *Nutt. in Journ. Acad. Philad. ser.* 2, i. 168.—Flores capitati, singuli bractea suborbiculata intus dense lanata bracteolisque setaceis stipati. Perianthium glabrum, campanulatum, alte 6-fidum, segmentis æqualibus. Stamina 2 v. 3, filamentis glabris. Ovarium 3-quetrum; styli brevissimi, apice capitato-stigmatosi. Nux ovoidea, obtuse 3-quetra. Embryo valde curvatus, excentricus, cotyledonibus orbiculatis, radicula elongata accumbenti-ascendente.—Herba annua. Folia subradicalia rosulata v. ad dichotomias caulis pauca fasciculata, lineari-spathulata, mollissime albo-lanata. Rami floriferi e collo oriundi tenues, rigiduli, interdum filiformes, patentes, glabri, remote dichotomi. Florum capitula terminalia v. ad dichotomias sessilia. Bracteæ sub capitulo v. potius sub dichotomia 3, sæpe basi connatæ, sub floribus singulis ovatæ v. orbiculatæ, extus glabræ, intus longe denseque albo-lanatæ. Flores parvi, glabri, bracteas non superantes.

Species 1, Californica. *Benth. in DC. Prod.* xiv. 23.

7. **Lastarriæa,** *Remy in C. Gay, Fl. Chil.* v. 289, *t.* 58.—Flores cymoso-glomerati, foliis floralibus subverticillatis bracteisque stipati. Perianthium tubulosum, rigidulum, 6-dentatum, dentibus recurvo-cuspidatis. Stamina 3, fauci perianthii affixa, filamentis brevibus. Ovarium 3-quetrum; styli 3, breviter filiformes, apice capitato-stigmatosi. Nux 3-quetra, oblonga. Embryo rectus v. leviter curvulus, subcentralis, albumine parco; cotyledones angustæ, radicula longiores.—Herba annua, pusilla, dichotoma, intricato-ramosissima, ramulis rigidulis articulato-fragillimis. Folia ad ramificationes 3–6-natim verticillata, parva, inæqualia. Inflorescentia densissime conferta, fastigiata, bracteis perianthiique lobis subsimilibus, cuspidulis recurvis tenacibus.

Species 1, Chilensis etiam in Californiæ maritimis lecta, ibi tamen forte inquilina. *Meissn. in DC. Prod.* xiv. 186. *Torr. et Gr. in Proc. Amer. Acad.* viii. 199.

8. **Pterostegia,** *Fisch. et Mey. Ind.* ii. *Sem. Hort. Petrop.* 48; *Sert. Petrop. t.* 21.—Flores solitarii v. in fasciculo pauci, singuli bractea post anthesin valde aucta membranaceo-scariosa stipati. Perianthium sessile, 6- v. rarius 5-fidum, lobis angustis æqualibus v. inæqualibus. Stamina 6 rarius 5, basi loborum affixa, filamentis filiformibus. Ovarium 3-quetrum; styli 3, breves, apice capitato-stigmatosi. Nux perianthio sæpius immutato longior, acute 3-gona. Embryo excentricus, curvus, cotyledonibus suborbiculatis, radicula longiuscula accumbenti-ascendente.—Herbæ dichotome ramosæ, ramis tenerrimis v. rigidioribus articulatisque diffusis v. prostratis. Folia opposita, petiolata, spathulata, orbiculata v. in eadem planta semel v. bis 2-loba, petiolis vagina brevi v. linea

transversa connexis. Flores minimi, ad axillas sessiles. Bractea fructifera valde aucta lataque cæterum quam maxime varia, sæpius argute dentata et cristis v. alis 2 dorsalibus nunc latissimis integerrimis dentatisve nunc parvis v. fere obsoletis instructa, et interdum perianthium ipsum circa fructum leviter scarioso-accreta.

Species 2, Californicæ. *Benth. in DC. Prod.* xiv. 27. *Torr. et Gr. in Proc. Amer. Acad.* viii. 200. *Hook. et Arn. Bot. Beech Voy. t.* 90.

9. **Kœnigia,** *Linn. Mant. n.* 1241.—Flores fasciculati, singuli bractea hyalina pedicello basi adnata demum parum aucta stipati. Perianthium alte 3-fidum, rarius 2-fidum v. 4-fidum. Stamina sæpius 3, supra lobos affixa, interdum 1, 2 v. 4, filamentis brevibus. Ovarium obtuse 3-gonum v. compressum; styli 3 v. 2, brevissimi, apice subcapitato-stigmatosi. Nux 3-gona v. compressa, pericarpio tenui. Embryo excentricus, plus minus arcuatus, cotyledonibus ovatis v. orbiculatis, radicula accumbenti-ascendente.—Herbæ annuæ, tenerrimæ, sæpe nanæ, glabræ. Folia ima opposita vagina brevi connexa, sub ramis solitaria petiolo basi leviter dilatato, summa plurima subverticillata, omnia parva, obovata, integerrima. Flores ad axillas pauci, intra folia ultima plures fasciculati, minimi, in pedicello articulati. Bractea hyalina tenerrima ad basin pedicelli, nunc minima post anthesin immutata, nunc demum aucta, semper tamen pedicello brevior.

Species 2, inter se valde affines nisi unius varietates, altera in regionibus arcticis et subarcticis hemisphærii borealis utriusque orbis et in montibus Sibiricis et Scopulosis late diffusa, altera Himalaica.—*Meissn. in DC. Prod.* xiv. 82. *Gærtn. Fruct. t.* 128. *Lam. Illustr. t.* 51. *Dcne. in Jacquem. Voy. Bot. t.* 147.

TRIBUS III. EUPOLYGONEÆ.

10. **Calligonum,** *Linn. Gen. n.* 680. (Pterococcus, *Pall. Voy. ed. Fr.* ii. 547, *t.* 16. Pallasia, *Linn. f. Suppl.* 37. Calliphysa, *Fisch. et Mey. Ind.* i. *Sem. Hort. Petrop.* 24.)—Flores hermaphroditi. Perianthium 5-partitum, segmentis subæqualibus planis, post anthesin immutatum v. marcescens. Stamina (12–18), filamentis subulatis basi in discum hypogynum connatis; antheræ ovatæ. Ovarium 4-gonum; styli 4, breviter v. longiuscule filiformes, apice capitato-stigmatosi. Nux perianthio subpersistente multo longior, 4-gona, angulis in longitudinem rectis v. plus minus spiraliter tortis, in alam simplicem v. duplicem productis, integris serratis v. varie cristatis v. setis liberis v. varie dilatato-connatis appendiculatis v. echinatis. Semen oblongum, teres v. 4-gonum, testa tenui; embryo (in speciebus paucis examinatus) centralis, rectus, teres, cotyledonibus angustis radiculæ subæquilongis.—Frutices ramosissimi, ramis flexuosis rigidis v. novellis tenuibus alternis fasciculatisve. Folia alterna, anguste linearia v. subulata, nunc minima; ocrea brevis, membranacea. Flores ad axillas intra bracteam ocreiformem solitarii v. fasciculati, in pedicello brevi articulati, ebracteolati. Nuces sæpius valde accretæ.

Species ad 20, locorum aridorum v. arenosiorum Africæ borealis et Asiæ occidentalis et mediæ incolæ. *Meissn. in DC. Prod.* xiv. 28 (subtribus *Calligoneæ*). *Borszcz. Aral. Casp. Callig. in Mem. Acad. Petersb. ser.* 7, iii. *cum tabb.* 3. *Boiss. Fl. Or.* iv. 998. *Pall. Fl. Ross. t.* 77, 78 (*Pallasia*). *Gærtn. f. Fruct.* iii. *t.* 184 (*Pallasia*) et 215 (*Calligonum*). *Jaub. et Spach, Ill. Pl. Or. t.* 471.

Genera tria in Prodromo recepta a Borszczowio l.c. optime scrutata et in unum juncta. Auctor sectiones 4 proponit ad fructus alarum setarum appendiciumve formam distinctas. Habitus tamen aliique characteres in toto genere similes sunt v. variationes paucas præbent, ad diversitates fructus vix respondentes, et sectiones nimis artificiales remanent.

11. **Pteropyrum,** *Jaub. et Spach, Ill. Pl. Or.* ii. 7, *t.* 107 *ad* 109.—Flores hermaphroditi. Perianthium 5-partitum, segmentis parum inæqualibus v. 2 exterioribus paullo minoribus, post anthesin immutatum v. marcescens. Stamina 8, filamentis filiformibus annulo piloso affixis; antheræ oblongæ. Ovarium 3-gonum, acuminatum; styli 3, brevissimi, late capitato-stigmatosi. Nux late 3-alata, basi lata, apice in rostrum con-

tracta; alæ ad contractionem interruptæ v. divisæ, in parte superiore v. rostro alis basalibus nunc directe superpositæ, nunc nuce sub rostro distorto basalibus alternæ. Semen basi dilatatum, concavum v. 3-gonum, superne rostratum; embryo excentricus, leviter curvus, cotyledonibus oblongis radicula multo brevioribus.—Frutices ramis rigidis virgatis. Folia alterna v. ad nodos fasciculata, parva, linearia v. spathulata; ocreæ brevissimæ, fere ad lineam transversam demum evanidam reductæ. Flores parvi, ad nodos cum foliis fasciculati intra bracteam ocreiformem solitarii v. gemini, pedicello breviter filiformi ebracteolato.

Species 5 v. 6, Orientales, usque ad Affghanistan extensæ. *Meissn. in DC. Prod.* xiv. 31. *Boiss. Fl. Or.* iv. 1001. *Wight, Ic. t.* 1809.

12. **Atraphaxis**, *Linn. Gen. n.* 449.—Flores hermaphroditi. Perianthium 4–5-partitum, segmentis 2 exterioribus sæpius minoribus, fructiferum auctum, segmentis interioribus v. omnibus scariosis nucem obtegentibus. Stamina 6–8 rarius 9, filamentis ima basi sæpius dilatatis; antheræ ovatæ. Ovarium compressum v. 3-gonum; styli 2 v. 3, brevissimi, late clavato-stigmatosi. Nux perianthio accreto inclusa, lenticularis v. 3-gona. Embryo excentricus, incumbenti-curvulus v. fere rectus, cotyledonibus angustis, radicula breviore ascendente.—Frutices rigide ramosissimi, ramulis sæpe apice spinescentibus. Folia alterna v. ad nodos fasciculata, angusta v. parvula, sæpe rigidula, uninervia reticulato-venulosa v. subpennivenia; ocreæ membranaceo-scariosæ, utrinque in stipulam productæ. Flores ad nodos sæpius fasciculati, intra bracteam ocreiformem solitarii v. gemini, pedicellis filiformibus articulatis ebracteolatis.

Species enumeratæ 17, sed plures inter se ægre distinguendæ, Asiæ mediæ et occidentalis incolæ, una a Schweinfurthio etiam in Ægypti desertis lecta.—*Meissn. in DC. Prod.* xiv. 74. *Boiss. Fl. Or.* iv. 1020. *L'Hér. Stirp. Nov. t.* 14. *Wats. Dendrol. Brit. t.* 119. *Ledeb. Ic. Fl. Ross. t.* 411. *Jaub. et Spach, Ill. Pl. Or. t.* 110 *ad* 113. *Bot. Mag. t.* 1065 (*Polygonum*).

Tragopyron, *Bieb. Fl. Taur. Cauc.* iii. 284. *Ledeb. Ic. Fl. Ross. t.* 422, 426, a Jaubert et Spach uti a Meissnero pro sectione *Atraphaxeos* retinetur, floribus 5-meris 8-andris 3-gynis, dum in specie typica sæpius 4-meri 6-andri 2-gyni sint, sed in *T. variabili*, Spach, a Boissiero ad *A. Billardieri*, Jaub. et Spach, vix ab *A. spinosa*, Linn. distinctam reducta, variant 4- v. 5-meri, 6–9-andri, 2- v. 3-gyni, et genus in integrum servatum naturale est.

13. **Oxygonum**, *Burch. Trav.* i. 548. (Ceratogonon, *Meissn. in Wall. Pl. As. Rar.* iii. 63.)—Flores polygami, ad axillas bractearum pauci. Perianthii tubus in fl. ☿ supra ovarium constrictus, in fl. ♂ vix ullus; limbus 5-partitus, segmentis 2 exterioribus paullo minoribus, post anthesin immutatus, marcescens. Stamina 8, limbo affixa, filamentis filiformibus; antheræ oblongæ. Ovarium tubo perianthii inclusum; styli 3, filiformes, basi sæpe connati, apice capitato-stigmatosi. Perianthii fructiferi tubus accretus, induratus, 3-gonus, angulis interdum alatis, faciebus sæpe prope basin v. medium versus tuberculo v. calcare patente duro instructis; limbus marcescens, ad apicem tubi diu persistens v. demum deciduus. Nux tubo clauso arcte inclusa at libera, angusta, testa fere membranacea. Embryo in albumine subcentralis, rectus, cotyledonibus planis late oblongis, radicula brevi supera.—Herbæ annuæ v. basi perennes, ramis elongatis. Folia alterna, integra sinuato-dentata v. irregulariter pinnatifida, superiora floralia mox ad bracteas vaginantes reducta; ocreæ membranaceo-scariosæ, truncatæ, margine sæpe ciliatæ. Racemi spiciformes terminales, elongati, virgati, bracteis floriferis dissitis. Pedicelli per anthesin exserti, fructiferi recurvi.

Species ad 7, Africæ orientalis tropicæ et australis incolæ. *Meissn. in DC. Prod.* xiv. 38, 39 (genera 2 ad specimina manca perperam distincta). *Boj. in Ann. Sc. Nat. ser.* 2, iv. *t.* 9 (*Polygonum*).

Genus ab omnibus distinctissimum, perianthio tubo supra nucem clauso *Emici* accedit, embryo *Rhei*, styli et characteres plures *Polygoni*. Alæ et calcaria perianthii fructiferi (nec nucis) in eodem specimine variant, imprimis in *O. alato*, Burch., ubi alæ nunc latæ nunc vix ad angulos prominentes, calcaria longiuscula v. sæpius ad tubercula reducta v. omnino nulla.

14. **Polygonella,** *Mich. Fl. Bor. Amer.* ii. 240. (Gonopyrum, *C. A. Mey. in Mem. Acad. Petersb. ser.* 6, vi. 144. Lyonia *et* Stopinaca, *Rafin. ex Endl.*)—Flores polygami hermaphroditi v. abortu unisexuales. Perianthium 5-partitum, segmentis 2 exterioribus minoribus patentibus v. demum reflexis, 3 interioribus erectis post anthesin accretis nuci appressis. Stamina 8, filamentis filiformibus v. basi leviter dilatatis v. interioribus basi latis 2-auriculatis; antheræ parvæ. Ovarium 3-gonum; styli 3, apice capitato-stigmatosi. Nux 3-gona, nitida, perianthii segmentis interioribus obtecta, pericarpio crustaceo. Embryo excentricus v. lateralis, rectus v. leviter incurvus, interdum flexuosus, cotyledonibus angustis.—Herbæ annuæ, erectæ, tenues, rigidulæ (v. basi frutescentes?). Folia alterna, lineari-subulata v. cuneata; ocreæ truncatæ v. obliquæ, nec scariosæ. Flores racemosi, parvi, colorati, secus rhachin intra bracteas parvas vaginantes sæpe imbricatas solitarii, pedicellati, racemis tenuibus paniculatis.

Species 5 v. 6, boreali-Americanæ. *Meissn. in DC. Prod.* xiv. 79 (*excl. P. articulata*).

15. **Polygonum,** *Linn. Gen. n.* 495.—Flores hermaphroditi v. rarius abortu polygami. Perianthium alte 5-lobum v. 5-partitum, sæpius coloratum, segmentis subæqualibus v. 3 exterioribus paullo majoribus, fructiferum nucem velans parum mutatum v. rarius succulentum v. 3-alatum. Stamina in flore 5-mero sæpius 8, in 4-mero 6, v. in utroque hinc inde pauciora, prope basin perianthii affixa; filamenta filiformia, ima basi sæpe dilatata v. circa discum annularem crenulatum basi perianthii adnatum crenis alterna; antheræ oblongæ ovatæ v. parvæ, loculis distinctis connectivo parvo junctis. Ovarium compressum v. 3-gonum; styli 2 v. 3, a basi distincti v. plus minus connati, stigmatibus terminalibus capitatis integris v. (in sect. *Pleuroptero*) latis subfimbriatis; ovulum sæpe stipitatum. Nux compressa v. 3-gona, angulis obtusis v. acutis, perianthio omnino obtecta v. apice brevissime exserta, pericarpio crustaceo nitido v. opaco v. rarius submembranaceo. Embryo excentricus v. lateralis, plus minus incumbenti-accumbenti-v. oblique curvulus, cotyledonibus angustis v. rarius oblongis radicula brevioribus v. longioribus.—Herbæ rarius basi frutescentes habitu vario, nunc humiles tenerrimæ v. prostratæ, nunc erectæ elatæ, interdum longe volubiles, rarissime fluitantes. Folia alterna, stipulis sæpissime membranaceo-scariosis, in ocream truncatam v. obliquam v. utrinque acuminatam integram laceram v. ciliatam connatis. Flores fasciculati v. rarius subsolitarii, fasciculis axillaribus v. intra bracteas laxas v. ocreas in spicas racemosve simplices v. paniculatos dispositis. Pedicelli infra v. supra medium articulati.

Species bene distinctæ vix 150, duplici fere numero a botanicis nonnullis recensitæ, per orbem fere totum terrarum late dispersæ, nec in frigidis alpinisve nec intra tropicos desunt, in hemisphærio boreali quam in australi numerosiores, nonnullæ tamen fere cosmopolitanæ. *Meissn. in DC. Prod.* xiv. 84, *et in Ann. Mus. Lugd. Bat.* ii. 56. *Hance in Ann. Sc. Nat. ser.* 5, v. 237. *Boiss. Fl. Or.* iv. 1025.

Genus polymorphum, species includit plures valde variabiles et extricatu difficiles, ab auctoribus interdum in genera plura, a Meissnero aliisque in sectiones divisum quarum sequentes nobis bene distinctæ videntur:—

1. *Tephis.* Fruticulus ramosissimus, dense foliatus, foliis parvis in petiolo brevi articulatis et inflorescentia *Aviculariæ.* Perianthium 4-fidum. Stamina vulgo 6, filamentis basi dilatatis. Nux compressa, stylis 2. Embryo incumbenti-incurvus. Species 1, Austro-Africana. Tephis, *Adans. Fam.* ii. 276.

2. *Avicularia.* Herbæ annuæ v. basi frutescentes, diffusæ prostratæ v. caulibus elongatis virgatis. Folia in petiolo brevi articulata, sæpius parvula; ocreæ scariosæ, sæpius utrinque in stipulas acuminatas v. laceras productæ. Florum fasciculi axillares v. superiores irregulariter et dissite spicati. Perianthium vulgo 5-partitum, staminibus 6 v. hinc inde paucioribus, filamentis 3 interioribus v. omnibus basi dilatatis. Nux 3-gona, stylis 3. Embryo lateralis, incumbenti-curvulus.—Species ad 50, per totam fere aream generis dispersæ, nonnullæ in cultis ruderatisve v. in arenosis maritimis cosmopolitanæ. *All. Fl. Pedem. t.* 90, *f.* 2. *Ten. Fl. Nap. t.* 35. *Waldst. et Kit. Pl. Hung. t.* 67. *Sibth. Fl. Græc. t.* 363, 364. *Ledeb. Ic. Fl. Ross. t.* 444. *Jaub. et Spach, Ill. Pl. Or. t.* 116 *ad* 126. *Wight, Ic. t.* 1808.

Duravia, a S. Wats. in Amer. Natural. vii. 665 pro sectione distincta proposita, est *P. californicum,*

Meissn., herba annua speciminibus nonnullis tenuibus *P. coarctati* v. *P. tenuis* similis, ab *Avicularia* separata ob folia basi non articulata et nucis pericarpium membranaceum, embryone accumbenti-incurvo. Specimina nostra nimis juvenilia sed folia inferiora articulata videntur et fructus (ex S. Wats. Bot. Calif. ii. 13 ined.) in speciminibus mancis tantum observatus.

3. *Pseudomollia*, Boiss. Fl. Or. iv. 1027 et 1043, species 1 v. 2 continet orientales, nanas, paronychioideas, tenues dichotomasque, v. ad glomerulum radicalem reductas, cæterum *Aviculariis* valde affines, sed styli 2 et nux compressa. Embryo elongatus fere periphericus. Specimina typica Kotschyana et Bungeana e Persia nobis desunt, sed specimen Griffithianum ex Affghanistan n. 1732, a Meissnero cum Kotschyano comparatum, characteri Boissieriano bene convenit, nisi caule paullo longius evoluto.

4. *Persicaria.* Herbæ interdum elatæ, erectæ v. ascendentes, rarius humiles v. suffrutices prostrati. Folia ovata lanceolata v. angusta, pennivenia, petiolo non articulato; ocreæ ore truncatæ nudæ v. ciliatæ. Spicæ aphyllæ, pedunculatæ, densæ v. interruptæ, terminales v. in axillis superioribus simplices v. plures subpaniculatæ. Flores in ocreis bracteantibus solitarii v. pauci, perianthio 5-mero sæpe colorato. Nuces compressæ v. 3-gonæ, stylis 2 v. 3. Embryo lateralis, incumbenti- accumbenti- v. oblique curvulus, cotyledonibus angustis. Species ad 50, per totam fere aream generis dispersæ, nonnullæ subcosmopolitanæ et una sæpe fluitans. Hic includimus sectiones tres Meissneri vix bene pro subsectionibus distinguendas: 1. *Persicariæ typicæ.* Herbæ sæpius nec semper annuæ, spicis sæpe laxis tenuibus v. brevibus. Flores sæpe pallidi, 2-gyni v. 3-gyni. Embryo sæpius, nec constanter in eadem specie, accumbenti-curvulus. *Reichb. Iconogr. Bot. t.* 491 *ad* 496. *All. Fl. Pedem. t.* 68, *f.* 2. *Wight, Ic. t.* 1798 *ad* 1801. *Meissn. in Mart. Fl. Bras.* v. i. *t.* 1, 3 *ad* 5. *Vell. Fl. Flum. Ic.* iv. *t.* 39, 42. 2. *Amblygonon.* Habitus specierum majorum *Persicariæ* v. caules elatiores et embryo incumbenti-curvulus. Species paucæ (*P. orientale*, Linn., et affines) Africæ, Asiæ et Americæ tropicæ incolæ. *Bot. Mag. t.* 213. *Meissn. in Mart. Fl. Bras.* v. i. *t.* 2. Lagunea, *Lour. Fl. Cochinch.* 220. 3. *Bistorta.* Herbæ rhizomate perenni, caule erecto subsimplici foliis plerisque subradicalibus. Spicæ terminales sæpius simplices densæque, floribus intense coloratis 3-gynis. Embryo accumbenti-incurvus. Species genuinæ 2 v. 3, boreales v. montanæ, gerontogeæ et Americanæ. *Wight, Ic. t.* 1797. *Klotzsch in Pr. Waldem. Reise, Bot. t.* 88, quibus addidit Meissner *P. amplexicaule*, Don, Lindl. Bot. Reg. 1839, *t.* 46, herbam Himalaicam caule elato subramoso et spicis sæpe 2–3, *P.* (*Amblygono*) *orientali* accedentem; et species 2 Himalaicas suffruticosas prostratas ramosissimas, spicis erectis longiusculis. *Wall. Pl. As. Rar. t.* 287. *Royle, Ill. Pl. Himal. t.* 80, *f.* 2, 3. *Bot. Mag. t.* 4622.

5. *Tovara.* Herbæ erectæ, foliis ovatis specierum nonnullarum *Persicariæ*, ocreis laxis. Spicæ aphyllæ, longissimæ, tenues, virgatæ, fasciculis dissitis paucifloris. Perianthium parvum, incurvum, 4-fidum. Stamina sæpius 5. Styli 2, longi, recti, fere ad apicem arcte contigui. Nux compressa, faciebus valde convexis. Embryo accumbenti-incurvus, cotyledonibus latiusculis. Species 2, inter se valde affines, altera boreali-Americana, altera Japonica, utraque in Prodromo xiv. 112 sub *Persicaria* inclusa. Tovara, *Adans. Fam.* ii. 276. Antenoron, *Raf. Fl. Ludov.* 28, charactere pessimo.

6. *Cephalophilon*, Meissn. Herbæ debiles, laxe ramosæ, nunc humiles tenerrimæ, nunc sæpius elongatæ flexuoso-scandentes, v. rarius validiores erectæ. Folia petiolata, ovata v. lanceolata, nunc deltoidea cordata v. hastata; ocreæ tubulosæ v. laxæ, non ciliatæ. Spicæ capituliformes globosæ v. rarius demum oblongæ, pedunculatæ, solitariæ v. paniculatæ, rarius subsessiles. Perianthium 5-fidum. Stamina 8 v. abortu pauciora. Styli 3 v. 2, sæpius basi v. interdum alte connati. Nux globosa v. compressa, perianthio succulento v. membranaceo arcte involuta. Embryo accumbenti-incurvus, cotyledonibus sæpius latiusculis. Species ad 24, pleræque Asiaticæ, una Australiana, paucæ Americanæ occidentales v. australes. *Wight, Ic. t.* 1804, 1805. *Klotzsch in Pr. Waldem. Reise, Bot. t.* 86.

In speciebus typicis rami læves sunt, et perianthium fructiferum sæpius membranaceum; inter illas *P. delicatulum* Meissn. insigne est caule tenerrimo nano, foliis parvis, et capitulis ad axillas subsessilibus. In eadem sectione sequentes includimus ab auctoribus nonnullis separatas:—

Ampelygonum, *Lindl. Bot. Reg.* 1838, *Misc.* 62 est *P. chinense*, Linn., Wight, Ic. t. 1806, species Asiatica late dispersa, caule validiore sæpe suberecto, capitulis sæpius corymboso-paniculatis, perianthio fructifero succulento baccato, quare interdum ad *Coccolobam* refertur.

Echinocaulos, *Hassk. in Flora* 1842, *Beibl.* ii. 20 (Chylocalyx, *Hassk. MS. olim*, *Meissn. in Ann. Mus. Lugd. Bat.* ii. 65) species 2 includit ex Asia orientali subscandentes, ramorum angulis retrorsum aculeatis v. setosis, perianthio fructifero ut in *P. chinensi* succulento, etsi membranaceum appareat in speciminibus siccis. Huc pertinent *P. perfoliatum*, Linn. et *P. Babingtonii*,

Hance (*Chylocalyx senticosus*, Meissn.). Petioli in priore ut in *P. chinensi* interdum basi auriculis foliaceis instructi.

Echinocaulon, Meissn., includit species plures Asiaticas v. Americanas ramis ut in *P. perfoliato* plus minus retrorsum aculeolatis setosisve, perianthio fructifero sæpius (an semper?) membranaceo. *Linn. Hort. Cliff. t.* 12. *Wight. Ic. t.* 1802, 1803. *Regel, Fl. Ussur. t.* 10.

7. *Aconogonum*, Meissn. Herbæ sæpe elatæ v. frutescentes. Spicæ v. racemi laxe cylindraceæ, sæpius paniculatæ. Flores 8-andri, 3-gyni. Perianthium fructiferum appressum, succulentum v. membranaceum. Nux insigniter 3-gona, perianthio inclusa v. breviter exserta. Embryo accumbenti-incurvus, cotyledonibus latiusculis planis. Species ad 8, Asiaticæ, quarum una etiam in montibus Europæis obvia. *All. Fl. Pedem. t.* 68, *f.* 1. *Ledeb. Ic. Fl. Ross. t.* 361. *Wight, Ic. t.* 1807. *Klotzsch in Pr. Waldem. Reise, Bot. t.* 87 (*Fagopyrum*).

De *P. molli*, Don, et *P. polystachyo*, Wall., dubium remanet an species revera distinctæ sint, an unius dioicæ sexus diversi, prior ♀ perianthio fructifero baccato, illa ♂ perianthiis majoribus immutatis, ovario in speciminibus nostris numerosis etsi parum aucto semper sterili, stirps utraque ad *Aconogonum* pertinet.

8. *Pseudopolygonella*, A. Gray. Herbæ annuæ, erectæ, graciles, habitu *Polygonellæ*, sed perianthii segmenta omnia circa fructum erecta, subæqualia v. 3 exteriora majora. Folia anguste linearia. Racemi spiciformes tenues, paniculati, bracteis parvis secus rhachin subimbricatis, floribus parvis, pedicellis filiformibus. Species 2, boreali-Americanæ, typica *P. articulatum* Linn., a Meissnero ad *Polygonellam* relata fuit, sed rite ad *Polygonum* revocatur. Perianthii segmenta omnia subæqualia, erecta, integerrima; ocreæ obtusæ, nec scariosæ nec ciliatæ. Huic adjungimus *P. fimbriatum*, Ell. (THYSANELLA, *A. Gray in Boston Journ. Nat. Hist.* v. 232), habitu simillimum, sed perianthii segmenta 3 exteriora circa fructum majora in alas dentatas v. laceras expansa, 2 interiora angustiora margine fimbriata; ocreæ scarioso-ciliatæ.

9. *Tiniaria*, Meissn. Herbæ volubiles, foliis cordatis hastatis v. sagittatis, ocreis breviter cylindraceis. Florum fasciculi in spicis simplicibus aphyllis axillaribus v. terminalibus secus rhachin dissiti. Perianthii fructiferi segmenta 3 exteriora majora, dorso carinata, carina obtusa v. in alam in pedicello plus minus decurrentem expansa. Stigmata 3, capitata, in stylo brevi sessilia v. subconnata. Nux perianthio accreto inclusa, 3-gona. Embryo accumbenti-incurvus. Huc pertinent *P. Convolvulus* L. et *P. dumetorum* L., utraque per regiones temperatas hemisphærii borealis late dispersa, cum speciebus v. forte varietatibus 3 v. 4 Americanis v. Asiaticis iis valde affinibus. BILDERDYKIA, *Dumort. Florul. Belg.* 18.

10. *Pleuropterus*. Herbæ longe volubiles v. elatæ, erectæ, flexuosæ. Racemuli floribundi, in paniculis axillaribus terminalibusque numerosi, floribus parvis 3-gynis. Perianthii fructiferi segmenta 3 exteriora ut in *P. dumetorum* aucta, carina dorsali in alam latam in pedicello plus minus decurrentem expansa. Styli breves, in stigmata peltata v. fimbriata expansi. Species 4, Japonicæ v. Asiæ temperatæ orientalis incolæ: *P. multiflorum*, Thunb., caule alto volubili et *P. cuspidatum* Sieb. et Zucc., Lindl. et Paxt. Fl. Gard. i. 137, *f.* 90, *P. Sachalinense* et *P. Weyrichii*, F. Schmidt, caule erecto elato. PLEUROPTERUS, *Turcz. in Bull. Soc. Imp. Nat. Mosc.* 1848, i. 587.

16. **Fagopyrum,** *Gærtn. Fruct.* ii. 182, *t.* 119.—Flores hermaphroditi. Perianthium 5-partitum, segmentis subæqualibus v. exterioribus vix majoribus, fructiferum immutatum. Stamina 8, filamentis filiformibus, lobis glanduliformibus disci perianthio adnati alternis; antheræ ovatæ. Ovarium disco arcte cinctum, 3-gonum; styli 3, liberi v. basi breviter connati. Nux perianthio marcescenti multo longior, 3-gona, angulis nunc obtusis nunc valde prominentibus subalatis. Embryo albumine inclusus, cotyledonibus latissimis contortuplicatis circa radiculam ascendentem varie convolutis.—Herbæ erectæ, annuæ v. rhizomate perenni. Folia alterna, petiolata, cordata v. deltoidea, 3–5-nervia et pennivenia; ocreæ laxæ, integræ v. laceræ. Flores e bracteis vaginantibus secus ramulos cymæ subimbricatis breviter pedicellati; cymæ terminales v. axillares, longe pedunculatæ, nunc densæ capituliformes, nunc laxiores dichotomæ.

Species 2, originis adhuc incertæ, verisimiliter e montibus Asiæ mediæ v. orientalis oriundæ, a temporibus antiquioribus in Asia et jam diu etiam in Europa late cultæ, et facillime in locis cultis arenosisve inquilinæ.—*Meissn. in DC. Prod.* xiv. 143. *Nees, Gen. Fl. Germ. Monochl. n.* 53. *Reichb. Iconogr. Exot. t.* 176 (*Polygonum*). *Bot. Reg.* 1846, *t.* 26.

TRIBUS IV. RUMICEÆ.

17. **Rheum,** *Linn. Gen. n.* 506, *Amœn. Acad.* iii. *t.* 4.—Flores hermaphroditi v. abortu masculi. Perianthium 6-partitum, patens, segmentis subæqualibus v. exterioribus paullo minoribus, post anthesin immutatum, marcescens. Stamina 9, rarius 6, filamentis basi v. altius incrassatis; antheræ ovatæ. Ovarium 3-gonum; styli 3, breves, recurvi, apice stigmatoso valde dilatato hippocrepico v. crenato-sublobato. Nux late v. anguste 3-alata. Embryo rectus, parum excentricus, cotyledonibus planis cordatis ovatis v. late oblongis, radicula brevi supera.—Herbæ robustæ, rhizomate crasso sublignoso. Folia ampla nunc maxima, sinuato-dentata v. palmatim lobata, basi 3-∞-nervia; ocreæ membranaceo-scariosæ, laxæ, marcescentes. Flores pedicellati, fasciculati, ebracteolati, fasciculis racemosis, racemis anguste paniculatis, foliis floralibus seu bracteis sub racemis paniculisve nunc amplis coloratis deciduis nunc parvis.

Species descriptæ 20, plures tamen reducendæ, Asiæ Sibiricæ Himalaicæ et orientalis incolæ. *Meisn. in DC. Prod.* xiv. 32. *Hayne, Arzneig.* xii. *t.* 6 *ad* 10. *Reichb. Iconogr. Exot. t.* 117. *Jaub. et Spach, Ill. Pl. Or. t.* 470. *Ledeb. Ic. Fl. Ross. t.* 491. *Royle, Ill. Himal. Bot. t.* 78, 78*a*. *Hook. f. Illustr. Himal. Pl. t.* 19. *Bot. Mag. t.* 3508, 4877, 6135. *Sweet, Brit. Fl. Gard. t.* 269.

Flores in *R. acuminato*, Bot. Mag. t. 4877, staminibus 6 delineati sunt, in illis tamen a nobis examinatis semper more generis 9 invenimus. In *R. nobili* tamen, Hook. f. Ill. Pl. Himal. t. 19, flores revera constanter 6-andros vidimus. Hæc species habitu insignis est; planta ineunte anthesi columnam elatam conicam refert, foliis floralibus amplis membranaceis coloratis venosis deorsum subimbricatis caulem inflorescentiamque velantibus. Paniculæ fructiferæ foliis floralibus emarcidis deciduisve denudantur.

18. **Oxyria,** *Hill, Veg. Syst.* x. 24, *t.* 24.—Flores hermaphroditi. Perianthii segmenta 4, 2 exteriora demum reflexa, 2 interiora majora erecta appressa. Stamina 6, filamentis brevibus; antheræ oblongæ. Ovarium compressum; styli 2, breves, patentes v. recurvi, in stigmata fimbriato-penicillata dilatati. Nux compressa, 2-alata. Embryo lateralis, rectus v. leviter incumbenti-incurvus, cotyledonibus lineari-oblongis radicula longioribus.—Herba perennis, humilis v. parum ramosa. Folia radicalia v. rarius unum etiam sub ramo infimo inflorescentiæ longe petiolata, orbiculato-cordata v. reniformia, integerrima; ocreæ membranaceo-scariosæ, latæ laxæque. Florum fasciculi ocrea parva stipati, secus ramos racemiformes paniculæ angustæ dissiti.

Species 1, in terris arcticis subarcticisque hemisphærii borealis utriusque orbis et in montibus elatioribus Europæ et Asiæ frequens. *Meisn. in DC. Prod.* xiv. 37. *Campd. Monogr. Rum. t.* 3. *Nees, Gen. Fl. Germ. Monochl. n.* 55. *Hook. Ic. Pl. t.* 483.

19. **Rumex,** *Linn. Gen. n.* 451.—Flores hermaphroditi v. abortu unisexuales. Perianthii segmenta 6, rarius 4, per anthesin interdum æqualia, exteriora post anthesin immutata, interiora circa fructum accreta, herbacea v. scariosa rarius rigida, integra v. margine fimbriato-dentata, costa interdum extus basi in tuberculum granuliformem incrassata. Stamina 6, filamentis brevissimis; antheræ oblongæ. Ovarium 3-gonum; styli 3, basi brevissime filiformes patentes v. recurvi, in stigmata varie fimbriata v. penicillato-multifida expansi. Nux perianthii segmentis interioribus arcte inclusa, 3-gona, angulis sæpius acutis interdum valde prominentibus. Embryo lateralis, incumbenti-incurvus v. rarius fere rectus, cotyledonibus linearibus v. oblongis.—Herbæ perennes v. rarius annuæ v. interdum suffrutices, rarius frutices elatiores. Folia nunc pleraque radicalia, nunc etiam in caule ramisque alterna, basi sæpe cordata v. hastata, integra dentata v. rarius subpinnatifida; ocreæ membranaceo-scariosæ sæpe hyalinæ, primum vaginantes, mox laceræ v. evanidæ. Flores ad nodos fasciculati, fasciculis bractea ocreiformi stipatis, pedicellis articulatis ebracteolatis; fasciculi nunc axillares, nunc in racemos paniculasve terminales dispositi.

Species enumeratæ ad 130, ab aliis auctoribus infra 100 æstimatæ, per regiones temperatas hemisphærii borealis latissime dispersæ, inter tropicos et in hemisphærio australi pauciores et sæpe

inquilinæ, nonnullæ in cultis ruderatisque nunc fere cosmopolitanæ. *Meissn. in DC. Prod.* xiv. 42, *et in Ann. Mus. Lugd. Bat.* ii. 55. *Nees, Gen. Fl. Germ. Monochl. n.* 54. *Boiss. Fl. Or.* iv. 1006. *Aresch. in Ofvers. K. Vet. Akad. Förh. Stockholm,* 1862, 57, *t.* 3.

Species pleræque facile distribuuntur in sectiones 2 naturales ab auctoribus consensu receptas: 1. *Lapathum.* Herbæ sæpius robustiores rarius humiles, foliis basi acutis obtusis v. auriculis obtusis cordatis. Perianthii segmenta interiora integerrima v. dentata, 2 v. omnia 3 basi extus sæpe granulifera.—*Hayne, Arzneigew.* xiii. *t.* 1 *ad* 5. 7. *Reichb. Iconogr. Eur. t.* 345, 366 *ad* 370, 486, 487, 516, 576. *Trim. Journ. Bot. t.* 131, 140, 146, 173. *Moris, Fl. Sard. t.* 108. *Guss. Pl. Rar. t.* 28, 29. *Ledeb. Ic. Fl. Ross. t.* 399. *Wight, Ic. t.* 1810. *Hook. Fl. Bor. Amer. t.* 174; *Ic. Pl. t.* 1245. 2. *Acetosa.* Herbæ suffrutices fruticesve, foliis sæpius plus minus hastatis sagittatisve, auriculis baseos acutis. Flores sæpe polygami. Perianthii fructiferi segmenta interiora sæpe valde aucta venoso-scariosa, semper integerrima et nunquam granulifera. *Hayne, Arzneig.* xiii. *t.* 6. *Jacq. Ic. Rar. t.* 67; *Hort. Vind.* iii. *t.* 93. *Lamb. in Trans. Linn. Soc.* x. *t.* 10. *Cav. Ic. t.* 22. *Sibth. Fl. Græc. t.* 346, 348. *Jaub. et Spach, Ill. Pl. Or. t.* 106. *Grant in Trans. Linn. Soc.* xxix. *t.* 90. ACETOSA, *Neck. Elem.* ii. 214. Characteres tamen supra dati interdum incerti. In *R. Lunaria, R. vesicaria, R. cordata,* etc. ad *Acetosam* relatis, folia basi sæpissime obtusissima v. obtuse cordata, et fructus *R. venosæ* aliarumque nonnullarum sectionis *Lapathi Acetosam* referunt.

R. acetosella, Linn., Sibth. Fl. Græc. t. 349, species fere cosmopolitana, sæpe *Acetosæ* relata, in Prodromo pro sectione distincta recepta est, floribus sæpius dioicis paniculatis, perianthio fructifero parum aucto, segmentis interioribus nuci subglobosæ arcte appressis eamque non superantibus.

R. bucephalophorus, Linn., Cav. Ic. t. 41; Sibth. Fl. Græc. t. 345, herba annua humilis, in regione Mediterranea frequens, insignis est pedicello fructifero rigido superne dilatato recurvo, perianthio circa fructum rigido, segmentis nunc uno solo nunc 2 v. 3 valde auctis aculeato-dentatis non granuliferis.

20. **Emex,** *Neck. Elem.* ii. 214. (Vibo, *Mœnch, Meth.* 318. Centopodium, *Burch. Trav.* i. 340.)—Flores monoici. ♂: Perianthium 5–6-partitum, segmentis æqualibus patentibus. Stamina 4–6, filamentis filiformibus; antheræ ovatæ. Fl. ♀: Perianthium urceolatum, tubo ovoideo, limbi lobis 6 2-seriatis. Ovarium tubo inclusum, 3-gonum; styli 3, breves, patentes, in stigmata fimbriato-lacera dilatati. Perianthium fructiferum auctum durissimum, tubo 3- v. 6-angulato inter angulos transverse lacunoso; lobi exteriores patentes spinescentes, interiores erecti, latissimi v. angustiores, obtusi mutici v. aristati. Nux tubo arcte inclusa at libera, acute 3-gona, pericarpio membranaceo v. vix crustaceo. Semen subteres; embryo valde incumbenti-arcuatus, lateralis v. fere periphericus, cotyledonibus angustis radicula longioribus.—Herbæ (annuæ?) rigidulæ. Folia alterna, longiuscule petiolata, ovata, integerrima v. sinuato-subdentata; ocreæ membranaceo-scariosæ, mox laceræ v. evanidæ. Florum fasciculi axillares v. superiores folio florali abortiente racemosi. Flores ♂ in fasciculis superioribus in pedicellis filiformibus articulati, ♀ in fasciculis inferioribus arcte sessiles.

Species v. forte varietates 2, altera regionis Mediterraneæ incola, altera Austro-Africana etiam in Australia inquilina. *Meissn. in DC. Prod.* xiv. 40. *Sibth. Fl. Græc. t.* 347 (*Rumex*).

TRIBUS V. COCCOLOBEÆ.

21. **Muehlenbeckia,** *Meissn. Gen. Pl.* 316, *Comm.* 227. (Sarcogonum, *Don in Sweet. Hort. Brit. ed.* 3, *ex Endl.*)—Flores polygamo-subdioici. Perianthium alte 5-fidum, lobis segmentisve subæqualibus v. 3 exterioribus paullo majoribus, fructiferum sæpius basi v. undique carnoso-incrassatum v. succulentum. Stamina 8, basi perianthii affixa, filamentis filiformibus, antheris ovatis, v. in fl. ♀ ad staminodia brevia reducta v. 0. Ovarium 3-gonum, in fl. ♂ parvum sterile v. 0; styli 3, breves, nunc brevissimi, apice in stigmata late capitata sublobata v. fimbriata dilatati. Nux obtuse v. acute 3-gona, perianthio plus minus carnoso v. succulento velata v. sæpe apice exserta, pericarpio crustaceo v. coriaceo. Semen sæpe 3-sulcum v. sub-3-lobum; embryo excentricus v. lateralis, incumbenti- v. accumbenti-incurvus, cotyledonibus angustis oblongisve.—Frutices v

ces sæpius volubiles. Folia alterna, petiolata, nunc parva suborbiculata, nunc cordata deltoidea v. sagittata, interdum linearia paucaque v. omnino nulla;)reves, laxæ v. interdum vix ullæ. Flores parvi, intra bracteas vaginantes fasci- fasciculis nunc ad axillas solitariis, nunc sæpius in spicas racemulosve breves s terminalesque simplices v. subpaniculatas dispositis. Embryonem invenimus enti- et incumbenti-incurvum in diversis seminibus ejusdem speciminis.

s ad 15, Australiæ, Novæ Zelandiæ, ins. maris Pacifici et Americæ australis extratropicæ æ incolæ. *Meissn. in DC. Prod.* xiv. 145, *et in Mart. Fl. Bras.* v. i. *t.* 22. *Hook. f. Handb. Fl.* 236. *Benth. Fl. Austral.* v. 273. *Labill. Pl. Nov. Holl. t.* 127. *Vent. Jard. Cels. t.* 88. *onogr. t.* 87. *Bot. Mag. t.* 3145. *Bot. Reg. t.* 1250 (*ic. omn. sub Polygono*).

atyclada, Meissn. (*Coccoloba platyclada*, Bot. Mag. t. 5382), ex ins. Solomon, insignis est mnino aphyllis late complanatis phyllodineis tenuiter multiseriatis. Ocreæ ad lineas sas reductæ. Flores singuli v. florum fasciculi ad nodos uno latere sessiles. Species e perianthio fructifero vix carnoso et stigmatibus subcapitatis *Polygono* accedunt, habitu t floribus dioicis *Muehlenbeckiæ* affiniores.

Coccoloba, *Linn. Gen. n.* 496.—Flores hermaphroditi v. hinc inde abortu uni- s. Perianthii tubus per anthesin brevis subapertus, demum incrassatus carnosus ulentus nucem includens eique sæpius adnatus, limbus 5-partitus, segmentis alibus, post anthesin immutatus connivens v. marcescens. Stamina 8, filamentis ibus, basi in annulum v. cupulam brevem connatis; antheræ ovatæ. Ovarium ı, ovoideum v. oblongum, apice contractum in stylos 3 breves, stigmatibus parum picue dilatatis integris v. sublobatis. Nux tubo perianthii aucto globoso v. ovoideo cluso, sæpeque ei adnata, limbo marcescente sæpius coronata, pericarpio crustaceo), intus haud raro laminis plus minus intrusis prope basin divisa. Semen m v. ovoideum, varie 3–6-sulcatum, albumine plus minus ruminato; embryo icus v. lateralis, cotyledonibus orbiculato-cordatis planis v. latissimis subconvolutis, brevi recta v. incumbenti ascendente.—Arbores fruticesve interdum alte scan- Folia alterna, sæpe coriacea, integerrima, nunc maxima orbiculata, nunc ; ocreæ variæ, cylindraceæ v. laxæ, membranaceæ v. tenues parvæ et mox e. Flores intra bracteas parvas ocreiformes fasciculati, breviter pedicellati, fasciculis racemosis, racemis longis brevibusve simplicibus v. paniculatis terminalibus busque.

s fere 80, omnes Americanæ imprimis tropicæ, perpaucæ extra tropicos in Mexico v. Florida *Meissn. in DC. Prod.* xiv. 151, *et in Mart. Fl. Bras.* v. i. *t.* 7 *ad* 21. *Gærtn. Fruct. t.* 45. *bs. t.* 8, 9; *Stirp. Amer. t.* 73 *ad* 78; *Hort. Schœnbr. t.* 267, 352. *Hayne, Arzneig.* x. *t.* 4. *ylv. Amer.* ii. *t.* 88, 89. *Vell. Fl. Flum. t.* 40, 41, 43, 44 (*Polygonum*). *Hook. Exot. Fl. t. ot. Mag. t.* 3130, 3166, 4536. *Bot. Reg. t.* 1816.

Campderia, *Benth. Bot. Voy. Sulph.* 159, *t.* 52.—Flores hermaphroditi v. hinc bortu unisexuales. Perianthii tubus brevissimus, demum sub fructu vix auctus, s; segmenta 5, per anthesin subæqualia, post anthesin aucta, coriaceo-carnosa, iora majora carinata, 2 interiora plana, omnia erecta fructum velantia. Stamina 8, v. 3–4 cæteris majora, filamentis brevibus basi dilatatis et in annulum connatis; rum connectivum latiusculum. Ovarium 3-gonum; styli 3, breves, stigmatibus itatis; ovulum subsessile. Nux 3-gona, angulis valde prominentibus subacutis, rpophoro carnoso (perianthii tubo solido) insidens, cæterum libera, perianthii tis auctis arcte inclusa. Semen sulcis profundis 3–6-lobum, albumine ruminato; excentricus, parum incurvus, cotyledonibus latiusculis.—Frutices v. arbusculæ mosæ. Folia alterna, pennivenia, tenuiter crebreque reticulato-venulosa; ocreæ ulæ. Flores intra bracteas parvas ocreiformes sæpius gemini, fasciculis longe , spica terminali simplici. Perianthium fructiferum perfectum in *C. gracili*, . sola notum, ubi fere semipollicare est in vivo pulchre coccineum.

s 2 v. 3, Mexici, Americæ centralis et Brasiliæ borealis incolæ. *Meissn. in DC. Prod.* xiv. *n Mart. Fl. Bras.* v. i. *t.* 6.

C. mexicana, Meissn., a *C. floribunda*, Benth., ex speciminibus nostris nequaquam differt. Species tamen tertia videtur *C. Lindeniana*, Benth., e Teapa (Tabasco), *Linden*, *n.* 1602, cujus ramuli et inflorescentia tenuiter ferrugineo-tomentelli, folia longe oblonga basi cordata. Fructus ignotus, sed ovarium sub anthesi more *Campderiæ* acute trigona, perianthii lobis nec tubo inclusa. Genus cæterum *Coccolobo* valde affine, nec nisi perianthio fructifero nuceque rite distinguendum.

24. **Antigonon**, *Endl. Gen.* 310.—Flores hermaphroditi. Perianthium 5-partitum, segmentis omnibus erectis, fructiferum auctum, membranaceo-scariosum, coloratum, segmentis 3 exterioribus majoribus late cordatis interioribus 2 oblongis. Stamina 7–8 (rarius 9?), filamentis filiformibus basi in annulum inter illa dentiferum connatis; antheræ ovatæ. Ovarium 3-gonum, in stylos 3 breves contractum, stigmatibus capitatis v. peltatis; ovulum sub anthesi ad apicem funiculi longi pendulum, demum erectum. Nux prominente 3-gona, perianthio accreto velata, pericarpio intus lævi. Semen subglobosum, sulcis profundis 3–6-lobum, albumine valde ruminato; embryo parum excentricus, incumbenti-curvulus, cotyledonibus anguste oblongis.—Caules a basi frutescente alte scandentes. Folia alterna, cordata v. deltoidea, petiolis amplexicaulibus; ocreæ parvæ v. ad lineam transversam reductæ. Flores intra bracteam parvam pauci, fasciculati, fasciculis racemosis, racemis terminalibus v. in axillis superioribus, rhachi sæpe in cirrhum ramosum desinente. Pedicelli breves, fructiferi tenues exalati. Flores primum parvuli, mox perianthiis accretis pulchre coloratis speciosi.

Species 3 v. 4, inter se difficillime distinguendæ, Mexici v. Americæ centralis incolæ, in variis regionibus Americæ calidioris ornamenti gratia cultæ.—*Meissn. in DC. Prod.* xiv. 184. *Hook. et Arn. Bot. Beech. Voy. t.* 69. *Bot. Mag. t.* 5816. *Fl. des Serres t.* 1886 (*quoad fructus male*). *Mast. in Gard. Chron.* 1877, i. 789.

25. **Brunnichia**, *Banks in Gærtn. Fruct.* i. 213, *t.* 45. (Rajania, *Walt. Fl. Carol.* 247.)—Flores hermaphroditi (v. abortu unisexuales?). Perianthium 5-fidum, lobis subæqualibus, fructiferum auctum, coriaceum, oblongo-conicum, exalatum, tubo fere suberoso, lobis conniventibus. Stamina 7–9, sæpius 8, e perianthii lobis per anthesin patentibus exserta, filamentis filiformibus, disco parum prominenti affixa; antheræ ovatæ. Ovarium 3-gonum; styli 3, elongati, apice capitato-stigmatosi; ovulum sub anthesi ad apicem funiculi longi pendulum, demum erectum. Pedicelli fructiferi uno latere ala coriacea cum perianthio continua instructi. Nux perianthio inclusa, 3-gona, pericarpio coriaceo intus rugoso intra sulcos seminis intruso. Semen sulcis profundis fere ad centrum in lobos 6 irregulariter divisum, albumine præter lobos subruminato; embryo in uno lobo leviter incumbenti-incurvus, cotyledonibus oblongis radicula sublongioribus.—Frutex scandens. Folia alterna, ovata, subcordata, petiolo basi amplexicauli, ocrea brevi v. obsoleta. Flores intra bracteam parvam fasciculati, fasciculis racemosis, racemis terminalibus axillaribusve ad apices ramorum paniculatis; rhaches racemorum v. interdum ramuli summi in cirrhum ramosum desinentes. Pedicelli per anthesin filiformes, prope basin articulati, fructiferi fere ad basin hinc alati.

Species 1, Americæ borealis civitatum australiorum incola. *Meissn. in DC. Prod.* xiv. 185.

Fallopia, *Adans. Fam.* ii. 274, 277, ab auctoribus dubie ad *Brunnichiam* relata, videtur ex auctoris notis et citatis genus omnino fictum ex *Anredera* et *Polygoni* sect. *Tiniaria*, cum cirrhis *Brunnichiæ*.

Tribus VI. Triplarideæ.

26. **Leptogonum**, *Benth. gen. nov.*—Flores hermaphroditi. Perianthium angustum, tubo brevi turbinato, alte 6-fidum, lobis linearibus erectis 3 interioribus minoribus. Stamina 3, ad apicem tubi lobis interioribus opposita, filamentis brevibus; antheræ ovato-globosæ, didymæ. Ovarium globoso-3-gonum, 3-sulcum, angulisprominentibus obtusis, loculo centrali parvo; stigmata 3, parva, sessilia, erecta; ovulum ab apice funiculi erecti pendulum (mox erectum?). Fructus . . .—Arbor v. frutex elatus. Folia alterna, ad apices ramulorum defoliatorum conferta, rigidula, pennivenia, venis primariis parallelis

subtus valde prominentibus, facie inferiore rufescente; ocreæ brevissimæ v. ad lineam transversam reductæ. Flores parvuli, sericeo-villosi, intra bracteam brevem oblique cupulatam solitarii v. gemini, secus rhachin spicæ tenuis subsessiles erecti approximati. Spicæ tenues, in innovationibus brevibus ad apices ramulorum inter folia plures, simplices v. ima basi in ramos 2–3 divisæ.

Species 1, *L. domingensis*, in arenosis San Domingo legit Schomburgk, n. 34. Genus pluribus notis *Ruprechtiæ* accedit, insigniter tamen differt floribus hermaphroditis, staminum numero et situ ovulo ut in *Brunnichia* pendulo, aliisque characteribus.

27. **Podopterus**, *Humb. et Bonpl. Pl. Æquin.* ii. 89, *t.* 107.—Flores hermaphroditi. Perianthii segmenta 6, 3 exteriora majora carina in alam membranaceo-scariosam in pedicello decurrentem expansa, minora plana erecta, fructiferum auctum, cæterum conforme. Stamina 6, filamentis filiformibus; antheræ ovatæ. Ovarium 3-gonum; styli breves, apice capitato-stigmatosi; ovulum subsessile. Nux perianthio clauso late 3-alato inclusa. Semen . . .—Frutex ramis rigide flexuosis, ramulis sæpe apice spinescentibus. Folia ad nodos fasciculata (a speciminibus nostris jam delapsa), obovato-oblonga, membranacea; ocreæ breves. Flores ad axillam bracteæ parvæ geminæ v. paucæ, fasciculis racemosis, racemis ad apices ramorum pluribus laxe subpaniculatis.

Species 1, Mexicana. *Meissn. in DC. Prod.* xiv. 171. Specimina nostra manca, et characteres plures ex Humb. et Bonpl. l. c. sumpti.

28. **Triplaris**, *Linn. Gen. n.* 103. (Velasquezia, *Bertol. Fl. Guatem.* 39, *t.* 11.)—Flores dioici. ♂: Perianthium infundibulare, limbo 6-fido, lobis æqualibus v. 3 interioribus paullo minoribus. Stamina 9, sæpe exserta, ad apicem tubi affixa, 3 lobis interioribus opposita, 6 lobis alterna, filamentis filiformibus. Ovarii rudimentum 0. Fl. ♀: Perianthium angustum, alte 6-fidum, lobis 3 exterioribus oblongis lanceolatisve erectis post anthesin auctis membranaceo-scariosis venosis aliformibus, 3 interioribus minoribus lineari-subulatis v. circa ovarium petaloideo-dilatatis. Ovarium acute 3-gonum, suberoso-carnosum, loculo centrali parvo; styli 3, breviter lineari-subulati, introrsum stigmatosi; ovulum sessile. Nux prominenter subacute 3-gona, perianthii basi ovoidea inclusa, apice lobis exterioribus quasi alis 3 coronata. Semen ovoideo-3-gonum; albumen sulcis plus minus profundis 3–6-lobum et ruminatum; embryo subcentralis, cotyledonibus latis planis v. leviter convolutis, radicula brevi supera.—Arbores ramis sæpius fistulosis. Folia alterna, breviter petiolata, sæpe ampla, ex ovato oblonga v. lanceolata, pennivenia et transversim venulosa, sæpeque impressionibus pluribus longitudinalibus e vernatione oriundis notata; ocreæ deciduæ. Flores intra bracteas sessiles v. subsessiles, in spicas longas molliter v. sericeo-pilosas simplices v. sæpius ramosas dispositi. Bracteæ ♂ sæpius latæ laxe 2–3-floræ, ♀ 1-floræ, ante anthesin anguste conicæ clausæ alabastrum includentes, per anthesin uno latere fissæ spathiformes.

Species enumeratæ 25, sed plures evidenter reducendæ et vix ultra 10 bene distinctas agnoscimus, per Americam australem tropicam late dispersæ. *Meissn. in DC. Prod.* xiv. 172, *et in Mart. Fl. Bras.* v. i. *t.* 24, 25. *Aubl. Pl. Gui. t.* 347. *Schomb. in Proc. Bot. Soc. Lond. t.* 2.

T. surinamensis, Cham., cum speciebus 4 v. 5 post eam in Prodromo enumeratis, verisimiliter unius varietates sunt et in *T. americana*, Linn., includendæ. Character Lœflingii, a Linnæo repetitus, videtur e flore fœmineo sumptus, perianthii lobis interioribus pro staminibus descriptis. Blochmannia, *Reichb. in Weig. Pl. Surin. exs. et Consp.* 163, est fide Meissnerii eadem species.

29. **Ruprechtia**, *C. A. Mey. in Mem. Acad. Petersb. ser.* 6, vi. 148, *t.* 4.—Flores dioici, ♂: Perianthium 6-partitum, patens, segmentis subæqualibus v. 3 interioribus paullo minoribus. Stamina 9, disco centrali lato sæpius pilosulo v. lobulato affixa, sæpius exserta, filamentis filiformibus; antheræ ovatæ v. oblongæ. Ovarii rudimentum 0 v. parvum pilosum. Fl. ♀: Perianthium alte 6-partitum, segmentis 3 exterioribus oblongis lanceolatisve erectis, post anthesin varie auctis, 3 interioribus multo minoribus linearibus tunc minutis v. vix conspicuis. Ovarium 3-gonum angulis obtusis et basi sæpe incrassatis, intus carnosum, loculo centrali parvo; stigmata erecta, oblonga v. lanceolata, ad

apicem ovarii sessilia v. stylis brevibus fulta; ovulum sessile. Nux obtuse 3-gona, pyramidata, basi incrassata 3–6-sulcata, perianthio toto v. ejus basi velata. Semen profunde 3–6-sulcatum, albumine lobato et ruminato; embryo subcentralis, cotyledonibus latis planis v. leviter convolutis.—Arbores v. frutices elatiores. Folia alterna, ovata v. lanceolata, quam in *Triplare* minora, pennivenia, impressionibus nullis vernationis. Ocreæ deciduæ. Flores intra bracteas parvas fasciculati, pedicellati, in racemos tenues multifloros sæpius breves simplices v. paniculatos dispositi.

Species fere 20, Americæ australis tropicæ v. subtropicæ incolæ. *Meissn. in DC. Prod.* xiv. 179. *Griseb. Pl. Lorentz.* 65.

Genus foliis inflorescentia floribus masculis et nucibus a *Triplari* bene distinctum, etsi perianthium fructiferum interdum subsimile. In sectiones 2 sequentes facile dividitur:—

1. *Pseudotriplaris.* Perianthium fructiferum (ei *Triplaris* subsimile) basi sericeo-villosum, ovoideum, lobis exterioribus accretis membranaceo-scariosis venosis alæformibus. Huc pertinent species 6 priores Prodromi, *Meissn. in Mart. Fl. Bras.* v. i. *t.* 26, cum *R. costata* et *R. Cruegeri*, Griseb., et *Triplari coriacea*, Karst. Fl. Columb. t. 169.

2. *Euruprechtia.* Perianthium fructiferum glabrum, segmentis exterioribus a basi erectis appressis oblongis subcoriaceis non venosis. Includit *R. salicifoliam*, C. A. Mey., Meissn. in Mart. Fl. Bras. v. i. t. 27, cum speciebus post illam in Prodromo enumeratis et *R. Virara*, Griseb.

30. **Symmeria**, *Benth. in Hook. Lond. Journ.* iv. 630.—Flores dioici (v. rarius in ramis diversis monoici?). ♂: Perianthium 6-partitum, segmentis omnibus suborbiculatis, exterioribus 2 v. 3 paullo minoribus. Stamina numerosa (20–50) in disco centrali dense conferta, filamentis breviter filiformibus. Ovarii rudimentum 0. Fl. ♀: Perianthium per anthesin masculo vix majus, segmentis 3 exterioribus liberis ovatis patentibus caducissimis, 3 interioribus majoribus, in massam carnosam obtuse 3-gonam apice 3-dentatam concretis, post anthesin valde auctum, pyramidato 3-gonum. Ovarium in cavo centrali inclusum at a pariete liberum, acute 3-gonum; stylus cum perianthio connatus, summo vertice intra dentes perianthii breviter liber, 3-alatus, stigmatibus 3 patentibus fimbriato-laceris mox deciduis. Perianthium fructiferum valde auctum, pyramidato-3-gonum, angulis acutis fere in alas coriaceas productis, suberoso-carnosum, apice breviter 3-lobum. Nux infra medium perianthii arcte inclusa, non tamen adnata, acutissime 3-gona, faciebus planis v. concavis nitidis. Semen conforme (in fructibus vix perfecte maturis observatum), albumine ruminato; embryo rectiusculus, cotyledonibus latis.—Arbores fruticesve. Folia alterna, ample oblonga, pennivenia; petioli breves, basi amplexicaules et membranaceo-dilatati, vix tamen distincte ocreati. Flores parvi, intra bracteas cupulares plures, brevissime pedicellati, fasciculis tenuiter spicatis, spicis ad apices ramorum paniculatis. Perianthium fructiferum sæpe 6–10 lin. longum.

Species 2, altera in Guiana et Brasilia boreali sat frequens, *Meissn. in DC. Prod.* xiv. 186, *et in Mart. Fl. Bras.* v. i. *t.* 23, alterius specimen masculum tantum vidimus in Herb. Hook. in Senegambia a Heudelot lectum sub n. 334; *S. paniculatæ* valde affinis videtur, notis pauci momenti diversa, sed stirpe fœminea adhuc ignota haud tute dignoscenda.

Ordo CXXXV. **PODOSTEMACEÆ.**

Endl. Gen. 268. Lindl. Veg. Kingd. 482. Tul. Podost. Monogr. in Archiv. Mus. Par. vi. 41.

Flores hermaphroditi v. in *Hydrostachi* dioici. *Perianthium* membranaceum, 3-fidum v. 5-partitum, v. 0, nisi pro perianthii segmentis haberes squamellas minimas v. lineares in pluribus generibus staminibus exterioribus alternis, a nonnullis staminodia dictis. *Stamina* hypogyna nunc ∞, numerosa v. pauca, filamentis liberis, in verticillum perfectum v. imperfectum circa ovarium disposita, nunc 2 v. rarius 3 filamentis plus

minus connatis v. stamen revera unicum ad unum latus ovarii, v. in flore ♂ stamen unicum subsessile. *Antheræ* ovatæ oblongæ v. breviter lineares, loculis 2 parallelis contiguis longitudinaliter dehiscentibus, ad basin connectivi angustissimi loculis brevioris v. subæquilongi affixæ. *Ovarium* sessile v. breviter stipitatum, liberum, 2–3-loculare, septis tenuissimis divisum v. septis jam ante anthesin evanidis v. abortivis 1-loculare v. in flore ♀ ab initio 1-loculare. *Styli* 2 v. 3, breves v. brevissimi, distincti v. basi brevissime connati, lineari-teretes, summo vertice v. superne v. fere a basi introrsum stigmatosi, v. ad stigmata lanceolata ovata varie dilatata v. brevissime pulviniformia reducti. *Ovula* ∞ sæpius numerossima, in placenta centrali crassiuscula septo utrinque adnata v. in flore ♀ in placentis 2 parietalibus sessilia, irregulariter ∞-seriata, anatropa. *Capsula* subglobosa ovoidea ellipsoidea v. oblonga, in generibus hermaphroditis 2–3-locularis v. septo abortivo 1-locularis, costis ∞ longitudinalibus sæpius prominulis rarius obscuris instructa, valvis 2 æqualibus v. inæqualibus v. 3 æqualibus septicide dehiscens, placenta centrali seminifera et in capsulis inæqualibus cum valva minore per dehiscentiam deciduis, valvis æqualibus v. in capsula inæquali valva majore diu in pedicellum persistentibus; in genere dioico capsula 1-locularis, introrsum rima longitudinali folliculatim dehiscens. *Semina* numerosa, minima, sessilia, vulgo ellipsoideo-compressa, sub lente rugulosa, testæ cellulis crassis aquæ ope mire tumefactis hyalinisque. *Albumen* 0. *Embryo* semini conformis, rectus, sæpius ad medium in cotyledones 2 divisus, radicula hilum versus obtusissima.

Herbæ aquaticæ immersæ, frequentissime annuæ, sed haud raro perennantes interdumque plane perennes, sæpe pusillissimæ, humiliores e parenchymate quasi omnino confectæ, nobiliores fibris ligneis vasisque annularibus et propriis etiam donatæ. Caulis basi v. interdum ex toto (rhizoma a nonnullis dictus) explanatus v. crassus, super saxa repens et tenacissime adhærens v. adnatus, margine varie lobatus v. in ramos liberos dichotomos v. varie divisos desinens. Folia heteromorpha, modo parva squamiformia v. folia muscorum frondosorum simulantia secus caules elongatos v. ad basin pedunculorum disticha v. tristicha, modo majora (in una specie 2-3-pedalia) varie expansa lobata v. lacera v. angustissima et repetiter divisa frondes algarum v. interdum *Trichomanis* species 3-pinnatas simulantia, in caulis basin v. secus ramos varie disposita, interdum cum lobis v. ramis caulis continua; hæc folia frondiformia in aqua fluitantia sæpe tenerrima facile deliquescentia et jam sub anthesi v. ante maturitatem fructus evanida, ita ut specimina sicca specierum revera foliatarum haud raro omnino aphylla videantur. Flores nunc in superficie caulis adnati v. explanati sigillatim sparsi v. fasciculati, nunc ad margines v. secus ramos caulis varie sparsi v. in spicam v. racemum simplicem v. ramosum dispositi, in axilla bracteæ concavæ sessiles v. breviter pedunculati, alabastro intra bracteam utriculiformem oblongam v. elongatam perfecte incluso; per anthesin pedicellus sæpius elongatur et longe exseritur, bractea apice disrupta v. oblique fissa prope basin pedicelli persistente cupulata v. tubulosa et *spathella* dicta.

Species ad 120, scopulis immersis affixæ, in undis rapide fluentibus rivulorum amniumque tropicalium Americæ, Africæ et Asiæ, perpaucæ extratropicales in America boreali et Africa australi, una sola adhuc imperfecte nota in Australia (in fluv. Johnstone regionis tropicæ orientalis a W. Hill detecta), et altera valde dubia ex Europa (apud Insubres) provenire dicitur.

In hoc ordine elaborando fere in omnibus secuti sumus monographiam eximiam Tulasnei, cum additamentis posterioribus Weddellii, cujus observationes accuratissimas in speciminibus perplurimis herbarii Kewensis confirmare potuimus. Paullulum tantum ab illo dissentimus de interpretatione homologa squamellarum ad basin filamentorum iisque alternarum, in floribus sic dictis perianthio destitutis observatarum. Ex Weddellio staminodia sunt, nobis potius perianthii segmentorum rudimenta videntur. Situm occupant perianthii *Weddellinæ*, semper staminibus plus minus externa sunt, et ubi longiuscula lineariaque evadent nunquam rudimenta antherarum ostendunt. De situ partis stigmatosæ stylorum non semper certi sumus, nam styli in speciminibus siccis jam post fœcundationem sæpissime plus minus desiccati sunt. Affinitates ordinis adhuc omnino dubiæ remanent.

CONSPECTUS GENERUM.

Tribus I. Tristicheæ. Flores hermaphroditi. Perianthium tubulosum v. campanulatum,

3-fidum. Stamina 1–3. Ovarium 3-loculare, stylis 3. Herbæ bryoideæ, foliis parvis secus ramos elongatos numerosis sæpe tristichis v. ad basin pedicelli fasciculatis, spathella nulla.

1. Tristicha. Stamen 1. Rami floriferi tristiche foliati, apice sæpius corymbosi.—*Utriusque orbis reg. trop.*

2. Terniola. Stamina 3. Rami v. gemmæ floriferi sæpius in caule adnato brevissimi, foliis parvis fasciculatis, rarius more *Tristichæ* elongati.—*Ind. or.*

Tribus II. Mourereæ. Flores hermaphroditi. Perianthii segmenta oblonga v. squamellæ lineares v. minimæ, staminibus exteriora iisque alterna. Stamina numerosa v. rarius infra 5, filamentis liberis v. rarius alte monadelphis, verticillum circa ovarium perfectum v. (dum pauca) imperfectum formantibus. Ovarium 2-loculare. Capsula æqualiter 2-valvis. Alabastra sæpissime spathella sacciformi v. tubulosa clausa involuta, post anthesin capsula sæpius pedicello elongato e spathella rupta exserta.

* *Perianthii segmenta 5, oblonga, staminibus æqualia, iisque alterna.*

3. Weddellina. Pedicelli uniflori, sparsi.—*Guiana, Bras. bor.*

** *Perianthium 0 præter squamellas lineares v. parvas staminibus exteriores iisque alternas.*

† *Flores in scapo simplici v. ramoso distiche spicati v. racemosi.*

4. Mourera. Flores superiores v. omnes pedicellati. Filamenta lineari-filiformia, libera. Styli lineares.—*Guiana, Brasilia.*

5. Lonchostephus. Flores podicellati. Filamenta oblonga, petaloidea, libera. Styli ovato-rotundati subquadrati.—*Brasilia.*

6. Lacis. Flores subsessiles. Filamenta alte in tubum subcorollinum connata. Styli lineares.—*Bras. bor.*

†† *Pedicelli uniflori, in caule adnato fasciculati v. secus ramos sparsi.*

7. Marathrum. Stamina 5–25, verticillo perfecto. Styli breviter lineares, contigui. Capsula apice obtusa, valvis concavis carinatis 3–5-costatis. Caules adnati rarius elongato-ramosi.—*Amer. trop.*

8. Rhyncholacis. Stamina 5–12, verticillo perfecto. Ovarium 2-carinatum, carinis in stylos discretos desinentibus. Capsula compressa, 2-rostrata, valvis cymbiformibus carinatis 3-costatis.—*Bras. bor., Guiana.*

9. Ligea. Stamina 2–∞, verticillo perfecto v. rarius imperfecto. Styli subteretes, contigui. Capsula apice obtusa, valvis concavis lævibus v. vix obscure costatis. Caules ramosi.—*Brasilia, Guiana.*

10. Apinagia. Stamina 2–5, verticillo imperfecto. Styli breviter lineares, contigui. Capsula apice obtusa, valvis concavis prominenter 3-costatis. Plantæ parvæ habitu nunc *Marathro* nunc *Ligeæ* accedentes.—*Bras. bor., Guiana.*

11. Lophogyne. Stamina 2–4, verticillo imperfecto. Stigmata sessilia, membranacea, patentia, late cristato-lobata. Capsula obtusa, valvis prominenter 3-costatis. Planta minima caule adnato.—*Brasilia.*

(Vide etiam 12, Angolæam, staminibus 3 vix connatis.)

Tribus III. Eupodostemeæ. Squamellæ exteriores ad latera filamenti v. columnæ stamineæ, utrinque 1, lineares v. minimæ, tertia rarius sub filamento. Stamina nunc 2 rarius 3, filamentis in columnam lateralem plus minus connatis, nunc 1. Ovarii septum sæpe evanidum. Capsula æqualiter v sæpe inæqualiter 2-valvis.

* *Stamina 3, basi brevissime connata.*

12. Angolæa. Stigma subsessile, orbiculare. Capsula obtusa, valvis æqualibus.—*Afr. trop.*

** *Stamina 2, filamentis alte in columnam connatis.*

† *Capsulæ valvæ æquales v. vix inæquales.*

13. Hydrobryon. Stigmata subsessilia, lata, plana, patentia, cristato-lobata. Capsula obtusa.—*Ind. or.*

14. Podostemon. Styli (v. stigmata) breviter lineares v. ovati, suberecti, integri. Capsula obtusa.—*Amer. bor., Brasilia, Madag., Ind. or.*

15. Ceratolacis. Styli (v. stigmata) lanceolati, acuti. Capsula 2-cornuta.—*Brasilia.*

†† *Capsulæ valvæ distincte inæquales.*

16. Mniopsis. Stigmata subsessilia, lata, brevissime multifida, fere in unum pulvinatum conferta. Columna staminea apice 3-fida, ramo centrali ananthero. Ovarium 2-loculare.—*Brasilia.*

17. Sphærothylax. Stigmata sessilia, brevia, lanceolata. Alabastra intra spathellam a pedicello apice inflexo reflexa. Ovarium 1-loculare.—*Afr. austr., Abyssinia.*

18. Castelnavia. Styli longe filiformes. Alabastra intra spathellam sessilia erecta. Ovarium 1-loculare. Plantæ minimæ.—*Fl. Araguay Brasiliæ.*

*** *Stamen* 1.

19. Oserya. Filamentum ovario arcte appressum, anthera extrorsum spectante, mox elastice dissiliente. Plantulæ nanæ.—*Mexico, Guiana, Brasilia.*

20. Devillea. Filamentum laxum, anthera introrsum spectante. Plantula nana, repens.—*Brasilia.*

Tribus IV. Hydrostachydeæ. Flores dioici, utriusque sexus in scapo simplici longe spicati. Folia longa, simplicia v. decomposita.

21. Hydrostachys. Stamen 1, anthera intra bracteam subsessilis. Ovarium 1-loculare, placentis 2 parietalibus; styli filiformes.—*Madagasc., Afr. austr. or.*

GENUS EXCLUSUM.

Halophila, Thou. (Diplanthera, Griff., Lemnopsis, Zipp.) ad **Naiadeas** refertur.

Tribus I. Tristicheæ.

1. **Tristicha,** *Thou. Nov. Gen. Madag.* 3. (Dufourea, *Bory in Willd. Spec. Pl.* v. 55; Philocrena, *Bong. in Mem. Acad. Petersb. ser.* 6, i. (*vel* iii. *pars* ii.), 80, *t.* 6.)—Flores hermaphroditi. Perianthium tenuiter membranaceum, 3-lobum, lobis obtusis leviter imbricatis. Stamen 1, filamento filiformi; anthera erecta, basi obtusa. Ovarium ovoideum v. ellipsoideum, 3-loculare; styli 3, lineares, breves, erecti mox patentes, introrsum stigmatosi; placentæ crassæ in angulo interno loculorum in centro ovarii connatæ. Capsula ovoidea, septicide 3-valvis, valvis 3-costatis æqualibus, septis evanidis v. a placenta solutis in margine valvarum persistentibus.—Herbæ bryoideæ inundatæ. Caules breves dense cæspitosi v. elongati fluitantes fastigiato-ramosissimi. Folia parva, sessilia, confertim tristicha, serieum 2 patentia, seriei tertiæ minora erecta. Flores ad apices ramulorum breviorum sæpius gemini; alabastra juniora subsessilia intra bracteas 2–3 quam folia majores; pedunculi tamen mox accreti, fructiferi longiusculi, basi bracteis stipati.

Species editæ 3, valde variabiles et vix limitibus certis distinctæ, inter tropicos per Americam et Africam late diffusæ. *Wedd. in DC. Prod.* xvii. 45; *Wight, Ic. t.* 1920.

Species quarta, ex insulis Philippinis, a Preslio ex specimine Hænkeano ad *Tristicham* relata, ab auctoribus recentioribus non visa, verisimiliter generis alieni est.

2. **Terniola,** *Tul. Podost. Monogr.* 189, *t.* 13. (Lawia, *Tul. in Ann. Sc. Nat. ser.* 3, xi. 112. Dalzellia, *Wight, Ic.* v. 34, *t.* 1919, 1920 (Tulasnea *in ic.*). Mnianthus, *Walp. Ann.* iii. 443.)—Flores hermaphroditi. Perianthium tenuiter membranaceum, 3-lobum, lobis obtusis erectis leviter imbricatis. Stamina 3, filamentis filiformibus liberis; antheræ erectæ, basi emarginatæ v. sagittatæ. Ovarium ovoideum v. ellipsoideum, 3-loculare; styli 3, breviter lineares, mox patentes, introrsum stigmatosi; placentæ crassæ in angulo interno loculorum in centro ovarii connatæ. Capsula ovoidea, septicide 3-valvis, valvis 3-costatis æqualibus, septis evanidis v. a placenta solutis in margine valvarum persistentibus.—Caules adnati thalliformes margine lobati, v. (in *T. ramosissima*, Wedd.) elongati fluitantes. Folia minima, setacea, in gemmis floriferis fasciculata, in ramis elongatis sparsa. Gemmæ floriferæ in caulis basi adnatæ v. secus ramos elongatos sparsæ, pedicello solitario basi fasciculo foliorum sæpius plus minus in vaginam connatorum stipati, spathella distincta nulla.

Species 7, Indiæ Orientalis Peninsulæ et Zeylaniæ incolæ. *Wedd. in DC. Prod.* xvii. 46.

TRIBUS II. MOUREREÆ.

3. **Weddellina,** *Tul. in Ann. Sc. Nat. ser.* 3, xi. 113; *Podost. Monogr.* 194, *t.* 13.—Flores hermaphroditi. Perianthii segmenta 5, distincta, staminibus exterioribus alterna, oblongo-linearia, erecta, mox patentia. Stamina ∞ (5-25), filamentis filiformibus distinctis; antheræ erectæ, loculis basi apiceque discretis. Ovarium ovoideum, 2-loculare; stylus indivisus, stigmate terminali crassiusculo vix dilatato subdidymo. Capsula subglobosa, valvis 2 æqualibus haud prominule 3-5-costatis dehiscens.—Caules adnati, carnosi, breviter funiformes, intricate ramosi. Folia (v. frondes steriles) fluitantia, elongata, ramosissima (interdum 2-3-pedalia), stipite basi sæpe digiti crassitie ramisque primariis teretibus squamis v. tuberculis zonatim versicoloribus (*Spruce*) scaberrimis, ramulis membranaceis brevibus acutis secus ramos decurrentibus numerosis valdeque inæqualibus. Pedicelli ad margines ramorum adnatorum sparsi, bracteis parvis concavis instructi, quarum suprema interdum major breviter vaginans, sed non spathellam clausam formans.

Species 2, altera typica Guianensis, bracteis squamiformibus plurimis secus pedunculum fere ad apicem dissitis floribus 5-10-andris, *Wedd. in DC. Prod.* xvii. 48, altera (*W. Uaupensis*, Benth.) a Spruceo in fluvio Uaupes Brasiliæ borealis sub n. 2752 lecta, a Weddellio ad *W. squamulosam* typicam relata, sed, ex schedis Spruceanis floribusque perfectis a Weddellio non visis, differt statura majore, pedunculis multo longioribus, basi tantum bracteis paucis instructis, quarum suprema major et fere vaginata ad formam spathellæ accedit, et staminibus ultra 20 in flore examinato, 25 ex Spruceo.

4. **Mourera,** *Aubl. Pl. Gui.* i. 582, *t.* 233 (Lacis, *Schreb. Gen.* 366, *non Lindl.*).—Flores hermaphroditi. Squamellæ minutæ, setaceæ v. dentiformes, staminibus exterioribus alternæ, rarius obsoletæ. Stamina ∞ (10-40), filamentis filiformibus leviter complanatis liberis v. subinde ima basi connatis; antheræ lineari-oblongæ, basi sagittatæ. Ovarium oblongum v. ovoideum, 2-loculare; styli 2, breviter lineares, patentes, fere a basi introrsum stigmatosi. Capsula ovoidea v. oblonga, valvis 2 æqualibus 4-5-costatis dehiscens.—Caulis adnatus crassus, carnosus v. durus, simplex v. ramosus. Folia ad basin scapi ampla, ulviformia, irregulariter lacero-dentata v. pinnatim v. irregulariter inciso-lobata. Scapi erecti, simplices v. ramosi. Flores secus rhachin distichi, ad axillas bractearum solitarii, juniores spathella tubulosa clausa occlusi, evoluti e spathella apice lacera exserti, longiuscule pedicellati, v. haud raro inferiores usque ad capsulæ maturitatem intra spathellam subsessiles remanent.

Species 3, Guianæ et Brasiliæ tropicæ incolæ.—*Wedd. in DC. Prod.* xvii. 49. *Tul. Podost. Monogr. t.* 1, *et in Mart. Fl. Bras.* iv. i. *t.* 73.

5. **Lonchostephus,** *Tul. Podost. Monogr.* 198, *et in Mart. Fl. Bras.* iv. i. *t.* 73.—Flores hermaphroditi. Squamellæ staminibus alternæ paucæ minutæ v. 0. Stamina ∞ (5-8), filamentis planis oblongis petaloideis acutis; antheræ terminales, parvæ, lineares, recurvæ. Ovarium ellipsoideum, 2-loculare; styli 2, plani, ovato-rotundati subquadrati, margine stigmatosi. Capsula ovoidea, valvis 2 æqualibus prominenter 3-costatis dehiscens.—Caulis adnatus brevis, crassus, obrepens. Folia ad basin scapi plura, rosulata, patentia, subdichotome ramosa, lobis ultimis setaceis. Flores in scapo simplici breviter racemosi, subdistichi. Pedicelli ad axillam bracteæ sæpe lacero-dentatæ solitarii, spathella longiuscule vaginata apice lacera stipati.

Species 1, Brasiliensis. *Wedd. in DC. Prod.* xvii. 51. Genus a *Mourera* speciebus minoribus paullulum differt filamentis petaloideis et stylorum forma.

6. **Lacis,** *Lindl. Introd. Nat. Syst. ed.* 2, 442, *non Schreb.*—Flores hermaphroditi. Squamellæ staminibus alternæ minutæ v. 0. Stamina ∞ (6-10), filamentis ultra medium in tubum fere corollinum connatis, superne linearibus liberis; antheræ lineares, sagittatæ. Ovarium anguste oblongum, 2-loculare; styli 2, lineares, fere a basi introrsum stigmatosi. Capsula oblonga, valvis 2 æqualibus prominenter 5-costatis dehiscens.—

Caulis adnatus, brevis, crassus, ramosus et quasi dentatus. Folia longe et anguste ulviformia, stipitata, pinnatim v. flabellatim repetiter divisa. Flores in scapo simplici disticho spicati, singuli ad axillam bracteæ parvæ hyalinæ fere sessiles, vix e spathella tubulosa vaginante apice lacera exserti.

Species 1, Brasiliæ borealis incola. *Wedd. in DC. Prod.* xvii. 52. *Tul. in Mart. Fl. Bras.* iv. i. *t.* 73.

7. **Marathrum**, *Humb. et Bonpl. Pl. Æquin.* i. 39, *t.* 11.—Flores hermaphroditi. Squamellæ staminibus alternæ minutæ v. 0. Stamina ∞ (5–25), filamentis filiformibus v. leviter dilatatis liberis v. subinde basi per paria connatis; antheræ lineares. Ovarium ovoideum v. oblongum, 2-loculare; styli 2, breviter lineares, liberi v. basi breviter connati, superne introrsum stigmatosi. Capsula ovoidea v. oblonga, valvis 2 æqualibus 3-rarius 5-costatis dehiscens.—Caulis adnatus crassus, squamosus, lobatus v. rarius elongato-ramosus. Folia sæpius elongata, nunc angusta ramosa ramis irregulariter filiformibus, nunc ulviformia longe lanceolata v. oblonga, subpinnatim lobata v. dentata, nunc tenuiter multifida repetiter pinnata frondes *Trichomanis* specierum dissectarum simulantia. Pedunculi uniflori, in caule adnato sparsi, basi spathella vaginati.

Species 6, Americæ tropicæ a Brasilia usque ad Mexicum incolæ. *Wedd. in DC. Prod.* xvii. 53. *Cham. in Linnæa* ix. *t.* 6. *Tul. Podost. Monogr. t.* 1, 2.

Genus *Mourera* valde affine, differt pedicellis in caule adnato sparsis nec in scapo racemosis. Formas duo præbet: 1. *Genuinæ*, pedicello apice in discum latum staminiferum expanso, staminibus ad marginem disci 5–8. Huc pertinent, *M. fœniculaceum*, *M. Schiedeanum*, et *M. utile*. 2. *Spuriæ*, pedicello apice ut in *Mourera* vix incrassato, staminibus 10–25: *M. oxycarpum*, *M. squamosum*, et *M. pauciflorum*.

M. lacunosum, Gardn., est *Lophogyne helicandra*, Tul.

8. **Rhyncholacis**, *Tul. in Ann. Sc. Nat. ser.* 3, xi. 95; *Podost. Monogr.* 81, *t.* 3, *ic. in Mart. Fl. Bras.* iv. i. *t.* 74 repetita.—Flores hermaphroditi. Squamellæ parvæ, ovatæ v. lanceolatæ, staminibus exterioribus alternæ. Stamina ∞ (5–12), verticillo perfecto, filamentis filiformibus v. leviter complanatis liberis v. subinde basi per paria connatis; antheræ lineares v. oblongæ, basi emarginatæ. Ovarium oblongum, compressum, 2-carinatum, 2-loculare, angulis in stylos breves dissitos introrsum stigmatosos desinentibus. Capsula oblonga v. ovata, plus minus septo contrarie compressa, breviter 2-rostrata, valvis 2 æqualibus cymbiformibus 3-costatis dehiscens, costa dorsali seu carina valde elevata.—Caulis adnatus crassus, ramosus. Folia brevia v. longiuscula, basi sæpe subteretia, circa pedicellorum fasciculos varie membranaceo-dilatata connataque, cæterum varie multifida, nunc lata fere ulviformia, nunc subfiliformia, semper repetiter lobata lobis ultimis tenuibus. Pedicelli in caule adnato sparsi v. sæpius fasciculati, basi parte persistente foliorum vaginati, spathella distincta nulla (v. cito deliquescente!).

Species 7, Guianæ et Brasiliæ borealis incolæ. *Wedd. in DC. Prod.* xvii. 56.

9. **Ligea**, *Tul. Podost. Monogr.* 85, *t.* 4 *ad* 7. (Œnone *et* Ligea, *Tul. in Ann. Sc. Nat. ser.* 3, xi. 96.)—Flores hermaphroditi. Squamellæ staminibus alternæ minutæ. Stamina 6-∞ perfecte verticillata, v. pauciora verticillo imperfecto, filamentis leviter complanatis liberis; antheræ lineari-oblongæ, basi subsagittatæ. Ovarium ovoideum, læve, 2-loculare; styli 2, subteretes, contigui v. basi brevissime connati, obtusi (vertice stigmatosi!). Capsula ovoidea v. globosa, valvis 2 æqualibus ecarinatis dorso convexis lævibus v. vix prominule 3-nervatis dehiscens.—Caules e basi adnata elongati, alii pauciflori longiores pinnatim ramosi foliiferi v. omnino aphylli, alii v. interdum omnes breviores ramosissimi. Folia sæpius angusta et lacera, v. interdum longe lanceolata et subintegerrima, in caulibus dichotomis parva linearia. Pedicelli in caulibus longis frondiformibus pauci, in dichotomis numerosi, breves, basi præter spathellam squamis paucis interdum in folia productis vaginati.

Species ad 13, Guianæ et Brasiliæ incolæ. *Wedd. in DC. Prod.* xvii. 58 *et* 59 (*Œnone* et *Nadaca* sect. *Eunadaca*).

Œnone, Tul., serius ab auctore ipso ad *Ligeam* reducta, a Weddellio iterum separatur ob stamina numerosiora in verticillum perfectum disposita, et species cæteras *Ligeæ* cum *Apinagia* ad genus suum Neolacis referuntur. Hæ tamen nobis multo melius tam habitu quam capsula vix v. non costata in Ligea retinendæ videntur etsi stamina sæpe ad 2–5 imperfecte verticillata reducuntur. In *L. Richardiana*, Tul. (*Neolacis*, Wedd.) variant 5–10 sæpius perfecte verticillata. Genera cæterum inter se valde affinia sunt. *L. alcicornis*, Tul. Podost. Monogr. 94, et in Mart. Fl. Bras. iv. i. t. 73 (*Œnone alcicornis*, Wedd.) melius a Spruceo in *Mourera* collocata fuit, ubi scapo ramoso ∞-floro, foliis ad basin scapi verticillatis, *M. Weddellianæ* approximatur.

10. **Apinagia**, *Tul. in Ann. Sc. Nat. ser.* 3, xi. 97; *Podost. Monogr. t.* 7. (Neolacis, *Wedd. in DC. Prod.* xvii. 59, *pro parte.*)—**Flores hermaphroditi. Squamellæ staminibus alternæ v. in floribus 2–3-andris 3–5. Stamina 2–5, verticillo sæpius imperfecto, filamentis leviter complanatis liberis; antheræ lineari-oblongæ, loculis basi longiuscule discretis. Ovarium ovoideum, distincte costatum, 2-loculare; styli 2, tenues, contigui v. basi brevissime connati (superne stigmatosi?). Capsula globosa ovoidea v. oblonga, valvis 2 æqualibus prominenter 3-costatis dehiscens.—Herbæ parvæ, habitu in diversis sectionibus diversæ. Pedicelli præter spathellam basi nudi v. foliis cito deliquescentibus stipati.**

Species ad 16, Guianæ et Brasiliæ borealis incolæ, in sectiones 2 bene distinctas distribuendæ:—

1. *Neolacis* (sect. *Euneolacis*, Wedd., excl. *N. Richardia*, *N. corymbosa*, *N. secundiflora* et forte *N. dissecta* ad *Ligeam* restituendis). Caules (e basi adnata?) dichotome ramosissimi, aphylli v. subinde in folia frondiformia expansi. Pedicelli in dichotomiis solitarii. Habitus fere *Ligeæ*, a qua hæc sectio differt staminibus paucioribus et capsulis prominenter costatis. *Mart. Nov. Gen. et Sp. t.* 2 (*Lacis*). *Tul. in Mart. Fl. Bras.* iv. i. *t.* 75, *f.* 1, 2.

2. *Chamælacis*, Wedd. Caulis adnatus, crassus, ramosus v. subinde membranaceo-dilatatus. Folia ad basin pedicellorum dissecta, fugacissima, in speciminibus siccis rara. Pedicelli in caule adnato sæpius fasciculati. Sectio *Marathro* valde affinis, differt præcipue statura pusilla et staminibus paucis. *Tul. Podost. Monogr. t.* 7, *f.* 2. *Bong. in Mem. Acad. Petersb. ser.* 6, i. (*vel* iii. *pars* ii.) *t.* 4 (*Lacis*). Monostylis, *Tul. Podost. Monogr.* 201, *et in Mart. Fl. Bras.* iv. i. *t.* 74, *f.* 3.

Sectio *Hymenolacis*, Wedd., a *Chamælaci* errore distincta fuit foliorum absentia. Adsunt certe in *N. Spruceana*, Wedd., etsi a speciminibus fructiferis jam deperita, verisimiliter etiam in planta juniore *N. membranaceæ*, sed post anthesin cito deliquescentia.

Blandowia, *Willd. in Gesellsch. Naturf. Fr. Berlin Mag.* iii. 100, *t.* 4, *f.* 2, plantula aquatica Peruviana ab auctore pro genere *Hepaticarum* descripta, ex charactere imperfecto et icone rudi absque dubio rite ad *Podostemaceas* relata est, et verisimiliter est species *Apinagiæ*, haud vero tute agnoscenda et nomen delendum. *B. Preissii*, Wedd. in DC. Prod. xvii. 85 (*Apinagia Preissii*, Tul.), ex Italia superiore, quam maxime dubia remanet.

11. **Lophogyne**, *Tul. in Ann. Sc. Nat. ser.* 3, xi. 99, *Podost. Monogr.* 109, *t.* 8, *f.* 2, *et in Mart. Fl. Bras.* iv. i. *t.* 73, *f.* 4.—**Flores hermaphroditi. Squamellæ exteriores 3–4, lineari-setaceæ, staminibus alternæ, valde inæquales, una sæpe staminibus æquilonga. Stamina 2–4, verticillo imperfecto, filamentis distinctis leviter complanatis; antheræ lineares. Ovarium ellipsoideum, 2-loculare; stigmata 2, subsessilia, lata, plana, membranacea, patentia, cristato-lobata et dentata. Capsula ovoidea, valvis 2 æqualibus prominenter 3-costatis dehiscens.—Herba minima, caule adnato carnoso membranaceo-dilatato lobato. Folia (a nobis non visa) fasciculata, lobata v. multifida, lobis ultimis filiformibus. Pedicelli in caulis basi adnata sparsi v. in angulis loborum, præter spathellam squamis v. foliis brevibus crassis irregulariter lobatis subcarnosis stipati.**

Species 2, Brasilianæ. *Wedd. in DC. Prod.* xvii. 65. Genus habitu speciebus minoribus *Apinagiæ* (*Chamælacis*) accedit, differt stigmate fere *Hydrobryi*.

Tribus III. Eupodostemeæ.

12. **Angolæa**, *Wedd. in DC. Prod.* xvii. 300.—**Flores hermaphroditi. Squamellæ exteriores 2–4, minutæ. Stamina 3, unilateralia, filamentis leviter complanatis liberis v. basi brevissime connatis; antheræ oblongæ. Ovarium breviter stipitatum a staminibus leviter aversum, ovoideum v. junius oblongum, septis evanidis v. abortientibus**

1-loculare, placenta centrali compressa; stigma subsessile, orbiculare, dense papillosum, vix didymum. Capsula ovoidea, valvis 2 æqualibus 3-costatis dehiscens.—Caules (e basi adnata?) lineares, basi incrassati, valde elongati, subdichotome ramosissimi, foliis a ramulis ultimis non bene distinguendis filiformibus. Spathellæ ad normam affinium juniores clausæ sed longiuscule pedunculatæ, in ramulis brevioribus fasciculatæ. Flores in spathella primum subsessiles, pedicello fructifero vix exserto.

Species 1, ad saxa in torrentibus Angolæ Africæ tropicæ vigens. Genus nulli prope affine inter *Moureas* et *Eupodostemoneas* subintermedium.

13. **Hydrobryum,** *Endl. Gen.* 1375, *pro parte.*—Flores hermaphroditi. Squamellæ exteriores 2, ad latera columnæ stamineæ, longiuscule lineares. Stamina 2, filamentis in columnam lateralem apice 2-fidam alte coalitis; antheræ oblongæ. Ovarium ovoideum, compressiusculum, 2-loculare; stigmata 2 subsessilia, sæpius inæqualia, lata, plana, membranacea, patentia, cristato-lobata et dentata. Capsula ovoidea, valvis 2 æqualibus 5-costatis dehiscens.—Caulis adnatus expansus, membranaceo-carnosus, thalliformis. Gemmæ fertiles seu pedicelli foliis pluribus squamiformibus distiche imbricatis basi stipati, in caule adnato sparsi. Flos spathella intra squamas sessili inclusus, capsula pedicello elongato exserta. Gemmæ steriles foliis fasciculatis filiformibus a Weddellio descriptæ a speciminibus nostris jam deperitæ nec a Griffithio aliisque depictæ.

Species 1, Indiæ Bengalensis orientalis incola. *Wedd. in DC. Prod.* xvii. 66. *Griff. in Asiat. Res.* xix. 105, *t.* 17; *Ic. Pl. As. t.* 544 (*Podostemon*). *Wight, Ic. t.* 1918, *f.* 2.

Genus a *Podostemone* (*Polypleuro*) differt stigmatibus iis *Lophogynis* similibus.

14. **Podostemon,** *Mich. Fl. Bor. Amer.* ii. 164, *t.* 44. (Dicræa, *male* Dicræia, *Thou. Gen. Nov. Madag.* 2.)—Flores hermaphroditi. Squamellæ exteriores 2, ad latera columnæ stamineæ, lineares, sæpe longiusculæ. Stamina 2, filamentis in columnam lateralem apice 2-fidam alte coalitis; antheræ late oblongæ. Ovarium ovoideum, 2-loculare; styli suberecti, breviter lineares v. ovati, acuti (margine stigmatosi?). Capsula ovoidea, obtusa, valvis 2 æqualibus v. vix inæqualibus, 3- v. 5-costatis, dehiscens, valva utraque persistente v. una post dehiscentiam decidua.—Herbæ in diversis sectionibus habitu diversæ. Pedicelli in caule adnato sparsi v. in ramis evolutis terminales v. laterales, basi præter spathellam nudi v. ∞-squamati. Flos in spathella sessilis, capsula pedicello accreto exserta.

Species ad 20, Americæ borealis, Brasiliæ, Madagascariæ et Indiæ orientalis incolæ. *Wedd. in DC. Prod.* xvii. 67 *et* 72 (*Dicræa et Podostemon*).

Genus a Michauxio et Thouarsio eodem anno stabilitum, ad specimina e regionibus distantibus (America boreali et Madagascaria) inter se non comparata, a Tulasneo et Weddellio in genera duo dividitur, patria et habitu neglectis, imprimis ad capsulæ valvis, in *Podostemone* inæqualibus una sola persistente, in *Dicræa* æqualibus utraque persistente, sed speciminibus perplurimis scrutatis distinctio nobis nec clara nec constans apparet. Sutura usque ad pedicellum attingit, et valva una sæpe paullo angustior in eodem specimine paullo post dehiscentiam cadit, v. utraque more generum præcedentium diu persistit. Sectiones sequentes facilius distinguendæ videntur:—

1. *Eupodostemon.* Caulis erectus v. fluitans, superne corymboso-ramosus, gemmis floriferis subterminalibus, inter ramulos v. folia ramosissima longe filiformia v. abbreviata. Huc pertinet species typica boreali-Americana, *Hook. Comp. Bot. Mag.* ii. *t.* 20 (*Lacis*) et, ei facile approximanda, *P. Chamissois*, Tul. Podost. Monogr. et in Mart. Fl. Bras. iv. i. t. 74, f. 2 (*P. disticha*, Wedd.), Cham. in Linnæa ix. t. 5 (*Lacis*), e Brasilia.

2. *Dicræa.* Caules plus minus evoluti, sæpe ramosi, nunc ramosissimi, gemmis floriferis quam in *Eupodostemone* paucioribus secus ramos lateralibus. Huc pertinere videntur præter speciem typicam Madagascariensem a nobis non visam (*D. minutiflora*, Tul.?), *D. dichotoma* et *D. elongata*, Tul., *D. stylosa*, Wight, et *D. algæformis*, Bedd., omnes Indicæ. *Wight, Ic. t.* 1916, 1917. *Bedd. in Trans. Linn. Soc.* xxv. *t.* 24.

3. *Polypleurum.* Caulis adnatus dilatatus, breviter at varie ramosus, gemmis floriferis pauci-squamatis, in superficie sparsis v. submarginalibus. Hic includendæ *Podostemonis* sectiones *Griffithella* et *Zeylanidium*, Tul., cum *Dicræa Wallichii*, Tul., *D. pterophylla* et *D. minore*, Wedd.

Griff. in Asiat. Res. xix. 103, *t.* 17; *Ic. Pl. Asiat. t.* 542, 543 (*Podostemon*). *Tul. Podost. Monogr. t.* 8, *f.* 5 (*Mniopsis*) *et t.* 9. *f.* 3 (*Hydrobryum*). *Wight, Ic. t.* 1918, *f.* 2 *ad* 5 (*Hydrobryum et Mniopsis*).

P. subulatus, Tul. Podost. Monogr. t. 9, f. 4, Wight, Ic. t. 1918. f. 1, e Zeylania, caule magis evoluto interdum breviter libero subcorymboso inter *Polypleurum* et *Eupodostemon* quasi medium tenet.

Genus Polypleurum, *Tayl. in Herb. Hook.*, a Tulasneo et Weddellio citatum, nunquam editum fuit. Ex scheda citata Taylori opusculum in conventu societatis *Royal Irish* (nec *Hist.*) *Academy* lectum fuit, sed nunquam in lucem productum.

4. *Selaginoides.* Gemmæ floriferæ in caule adnato dense fasciculatæ, elongatæ, undique usque ad spathellam squamis crassis tetrastiche imbricatis obtectæ. In ramis v. gemmis sterilibus squamæ plurimæ pariter imbricatæ, superiores apice in folia longe filiformia desinentes, et folia summa a basi filiformia, Species indica. *Bedd. in Trans. Linn. Soc.* xxv. 223, *t.* 25 (*Mniopsis*). Huic forte affinis est species Australiana e hujus ordine supra memorata, cujus genus ex speciminibus imperfectis non rite determinandum.

In *Dicræa imbricata*, Tul., e Madagascaria, nobis ignota, gemmæ floriferæ terminales dicuntur ut in *Eupodostemone*.

15. **Ceratolacis,** *Wedd. in DC. Prod.* xvii. 66.—Flores hermaphroditi. Squamellæ exteriores 2, ad latera columnæ stamineæ, lineares, breves. Stamina 2, filamentis in columnam lateralem 2-fidam ad medium connatis; antheræ ovatæ. Ovarium oblongum, 2-carinatum, 2-loculare, angulis in stylos lanceolatos acutos desinentibus. Capsula oblonga, apice truncata, stylis induratis divergentibus 2-cornuta, valvis 2 cymbiformibus carinatis obscure 3-nerviis dehiscens.—Caulis adnatus parvus, carnosulus, oblongus v. linearis, irregulariter sinuatus v. ramosus. Folia parva, tenera, fasciculata, linearia, 2–3-furca. Pedicellus in fasciculo unicus, e spathella tubulosa 2-fida demum exsertus.

Species 1, Brasiliana. *Tul. Podost. Monogr.* 126, *t.* 10, *f.* 1 (*Dicræa*), *ic. in Mart. Fl. Bras.* iv. 1, *t.* 74, *f.* 1 *repetita.* Specimen nostrum valde mancum et characteres florales imprimis ex ic. et descr. citatis, quæ genus ostendunt *Podostemoni* affine, cum capsula *Rhyncholacis.*

16. **Mniopsis,** *Mart. et Zucc. Nov. Gen. et Sp.* i. 3, *t.* 1. (Crenias, *Spreng. Syst. Cur. Post.* 247.)—Flores hermaphroditi. Squamellæ exteriores 2, ad latera columnæ stamineæ, lineares, longiusculæ. Stamina 2, filamentis in columnam lateralem superne 3-fidam ultra medium connatis, ramis lateralibus antheriferis intermedia ananthera; antheræ ovato-quadratæ. Ovarium late ovoideum, obliquum, linea suturali obliqua ad stipitem non attingente, inæqualiter 2-loculare; stigmata 2, subsessilia, brevia, lata, plurifida, laciniis crassis lanceolatis dense papillosis patentibus. Capsula subglobosa, valvis 2 valde inæqualibus oblique dehiscens, valva minore dissiliente, majore prope basin dorsifixa persistente.—Plantulæ pusillæ bryoideæ, caulibus teretiusculis ex toto v. solum apice confertim foliatis. Folia integra squamiformia v. ∞-partita. Flores axillares v. solitarii terminales, in spathella sacciformi inclusi, pedicello accreto demum exserti. (*Char. ex ic. et descr. citat.*).

Species 2, Brasilianæ, a nobis non visæ. *Wedd. in DC. Prod.* xvii. 77. *Tul. Podost. Monogr. t.* 8, *f.* 4, *ic. in Mart. Fl. Bras.* iv. 1, *t.* 74, *f.* 4, *repetita.*

De filamenti intermedii columnæ stamineæ homologia dubium remanet, videtur tamen ex iconibus staminodium, stamini tertio *Angolææ* respondens, potius quam squamella tertia exterior columnæ adnata.

17. **Sphærothylax,** *Bisch. in Flora,* 1844, 426, *t.* 1. (Anastrophea, *Wedd. in DC. Prod.* xvii. 78.)—Flores hermaphroditi. Squamellæ exteriores 2, parvæ, ad latera columnæ stamineæ. Stamina 2, filamentis in columnam lateralem complanatam connatis; antheræ ad apicem columnæ sessiles. Ovarium ovoideum, septo abortivo 1-loculare; stigmata 2, brevia, lanceolata, sessilia, erecta v. inflexa. Capsula ovoidea, valvis 2 late 3-costatis parum inæqualibus dehiscens, majore prope basin affixa persistente, minore ad basin non perfecte attingente decidua.—Caules alii basi adnati explanati lateque lobati, alii his marginales v. in superficie sparsi elongati lineares v. in ramos longos lineari-fili-

formes divisi. Spathellæ aliæ in superficie caulis adnati sparsæ sessiles v. subinnatæ, aliæ secus caules elongatos v. ramos primarios dense fasciculatæ sessiles v. brevissime stipitatæ. Pedicelli diu intra spathellam apice reflexi, demum exserti spathella plus duplo longiores, incurvi v. fere recti, capsula matura sæpius erecta.

Species 2, altera (*Wedd. in DC. Prod.* xvii. 78) typica Capensis, nana, capsulis minimis globosis, altera (*Anastrophea*, Wedd.) Abyssinica, multoties major, capsulis ovoideis, a Weddellio generice distincta floribus in spathella reflexis et anthera unica 4-loculari. Flores tamen in specie typica pariter in spathella reflexi ut jam a Bischofio l. c. t. 1, f. 6, delineantur, et nostro sensu antheræ in *Anastrophea* more generum affinium duæ sunt perfecte distinctæ 2-loculares que, nec in unum 4-locularem connatæ.

18. **Castelnavia,** *Tul. et Wedd. in Ann. Sc. Nat. ser.* 3, xi. 108.—Flores hermaphroditi. Squamellæ exteriores 2 v. 3 lineares ad basin staminum v. 0. Stamina 2, rarius fortuito 3 v. 1, filamentis complanatis ad unum latus ovarii breviter connatis. Ovarium ovoideum, curvulum, septo abortivo v. evanido 1-loculare, prope basin oblique affixum; styli 2, longe filiformes (superne introrsum stigmatosi ?). Capsula oblique ovoidea v. oblonga, 2-valvis, valvis 3–5-nerviis, sutura valde obliqua separatis, altera majore dorso prope basin affixa persistente, altera minore per dehiscentiam decidua.—Caules adnati tenues, explanati, varie ramosi, exsiccati sæpe albi. Folia in superficie caulis sparsim fasciculata v. lateralia, late membranacea et lacera v. filiformia multifida. Gemmæ floriferæ paucisquamatæ squamis interdum in folia filiformia desinentibus v. subnudæ, spathella interdum in caule ipso immersa v. ad marginem exserta v. gemmam squamatam terminans. Capsula modo intra spathellam etiam matura sessilis, modo plus minus pedicellata exsertaque.

Species 7, omnes ad rupes fluminis Araguay, Brasiliæ tropicæ, limitatæ. *Wedd. in DC. Prod.* xvii. 80. *Tul. Podost. Monogr. t.* 11, 12, *ic. in Mart. Fl. Bras.* v. 1, *t.* 76 *repetitæ.*

Carajæa, *Wedd. in DC. Prod.* xvii. 84, est plantula pusilla in eodem flumine Araguay lecta et a Tulasneo in Podost. Monogr. 175, in *Castelnavia* inclusa, cui habitu et stylis filiformibus convenit; capsula tamen adhuc ignota, et a genere paullulum differt filamentis a basi liberis. Species igitur dubia remanet, nos specimina non vidimus.

19. **Oserya,** *Tul. et Wedd. in Ann. Sc. Nat. ser.* 3, xi. 105.—Flores hermaphroditi. Squamellæ exteriores 2, minutæ, ad latera filamenti. Stamen 1, filamento laterali complanato primum ovario arcte appresso, polline emisso elastice dissiliente (*Schomb.*); anthera oblonga, extrorsum 2-locularis. Ovarium oblique oblongum, 2-loculare; stigmata 2 brevissima, sessilia, libera. Capsula ovoidea, plus minus obliqua, valvis 2 inæqualibus 3–5-costatis, majore persistente, altera paullo minore decidua, sutura vix ad basin attingente.—Plantulæ nanæ. Caules a basi adnata breves, pusilli, ramis crassiusculis, ramulis foliisve subdistichis a basi latiuscula setaceo-multifidis. Spathellæ parvæ, in parte adnata caulis v. ad basin ramorum sessiles v. breviter pedunculatæ. Capsula e spathella longiuscule pedicellata.

Species 4, Mexici, Guianæ et Brasiliæ incolæ. *Wedd. in DC. Prod.* xvii. 83. *Tul. Podost. Monogr.* 151, *t.* 10, *f.* 2, 3, *ic. in Mart. Fl. Bras.* iv. i. *t.* 75, *f.* 3, *repetita.* Specimina nostra manca, characterem damus imprimis ex ic. et descr. citatis et ex Schomburgkii schedis et icone ad vivum depicta.

20. **Devillea,** *Tul. et Wedd. in Ann. Sc. Nat. ser.* 3, xi. 107, *et in DC. Prod.* xvii. 82.—Flores hermaphroditi. Squamellæ exteriores 3, lineares, breves, una infra filamentum, 2 ad latera. Stamen 1, filamento laterali filiformi; anthera oblongo-ovata, basi emarginata, introrsum 2-locularis. Ovarium globosum, 2-loculare, septo vix perspicuo. Capsula globosa, valvis inæqualibus sutura tamen vix excentrica, valva majore persistente minore decidua.—Herbula caule adnato repente filiformi ramoso, e nodis gemmas v. caules breves foliiferos emittente. Folia circa pedicellum disticha, tenuia, dichotome laciniata, basi dilatata et ligula instructa. Spathella longe tubulosa, pedicello breviter exserto. (*Char. ex ic. et descr. citat.*)

Species 1, Brasiliæ tropicæ incola, a nobis non visa. *Tul. Podost. Monogr. t.* 13, *f.* 1, *ic. in Mart. Fl. Bras.* iv. 1, *t.* 75, *f.* 4, *repetita.* Genus evidenter *Oserya* valde affine.

formes divisi. Spathellæ aliæ in superficie caulis adnati sparsæ sessiles v. subinnatæ, aliæ secus caules elongatos v. ramos primarios denso fasciculatæ sessiles v. brevissime stipitatæ. Pedicelli diu intra spathellam apice reflexi, demum exserti spathella plus duplo longiores, incurvi v. fere recti, capsula matura sæpius erecta.

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Species 7, omnes ad rupes fluminis Araguay, Brasiliæ tropicæ, limitatæ. *Wedd. in DC. Prod.* xvii. 80. *Tul. Podost. Monogr. t.* 11, 12, *ic. in Mart. Fl. Bras.* v. 1, *t.* 76 *repetitæ*.

Carajæa, *Wedd. in DC. Prod.* xvii. 84, est plantula pusilla in eodem flumine Araguay lecta et a Tulasneo in Podost. Monogr. 175, in *Castelnavia* inclusa, cui habitu et stylis filiformibus convenit; capsula tamen adhuc ignota, et a genere paullulum differt filamentis a basi liberis. Species igitur dubia remanet, nos specimina non vidimus.

19. **Oserya**, *Tul. et Wedd. in Ann. Sc. Nat. ser.* 3, xi. 105.—Flores hermaphroditi. Squamellæ exteriores 2, minutæ, ad latera filamenti. Stamen 1, filamento laterali complanato primum ovario arcte appresso, polline emisso elastice dissiliente (*Schomb.*); anthera oblonga, extrorsum 2-locularis. Ovarium oblique oblongum, 2-loculare; stigmata 2 brevissima, sessilia, libera. Capsula ovoidea, plus minus obliqua, valvis 2 inæqualibus 3–5-costatis, majore persistente, altera paullo minore decidua, sutura vix ad basin attingente.—Plantulæ nanæ. Caules a basi adnata breves, pusilli, ramis crassiusculis, ramulis foliisve subdistichis a basi latiuscula setaceo-multifidis. Spathellæ parvæ, in parte adnata caulis v. ad basin ramorum sessiles v. breviter pedunculatæ. Capsula e spathella longiuscule pedicellata.

Species 4, Mexici, Guianæ et Brasiliæ incolæ. *Wedd. in DC. Prod.* xvii. 83. *Tul. Podost. Monogr.* 151, *t.* 10, *f.* 2, 3, *ic. in Mart. Fl. Bras.* iv. i. *t.* 75, *f.* 3, *repetita*. Specimina nostra manca, characterem damus imprimis ex ic. et descr. citatis et ex Schomburgkii schedis et icone ad vivum depicta.

20. **Devillea**, *Tul. et Wedd. in Ann. Sc. Nat. ser.* 3, xi. 107, *et in DC. Prod.* xvii. 82.—Flores hermaphroditi. Squamellæ exteriores 3, lineares, breves, una infra filamentum, 2 ad latera. Stamen 1, filamento laterali filiformi; anthera oblongo-ovata, basi emarginata, introrsum 2-locularis. Ovarium globosum, 2-loculare, septo vix perspicuo. Capsula globosa, valvis inæqualibus sutura tamen vix excentrica, valva majore persistente minore decidua.—Herbula caule adnato repente filiformi ramoso, e nodis gemmas v. caules breves foliiferos emittente. Folia circa pedicellum disticha, tenuia, dichotome laciniata, basi dilatata et ligula instructa. Spathella longe tubulosa, pedicello breviter exserto. (*Char. ex ic. et descr. citat.*)

Species 1, Brasiliæ tropicæ incola, a nobis non visa. *Tul. Podost. Monogr. t.* 13, *f.* 1, *ic. in Mart. Fl. Bras.* iv. 1, *t.* 75, *f.* 4, *repetita*. Genus evidenter *Oserya* valde affine.

TRIBUS IV. HYDROSTACHYDEÆ.

21. **Hydrostachys**, *Thou. Gen. Nov. Madag.* 2.—Flores dioici, utriusque sexus dense spicati, singuli intra bracteam sessiles, perianthio squamellisve 0. Fl. ♂ : Stamen intra bracteam planiusculam membranaceam 1, filamento brevissimo, extrorsum antheræ loculos 2 majusculos distinctos ferente. Fl. ♀ : Ovarium intra bracteam cucullatam v. cymbiformem mox induratam sessile, 1-loculare, placentis 2 parietalibus ; styli 2, filiformes, erecto-divergentes, elongati (superne longiuscule stigmatosi ?). Capsula parva, ovoidea v. oblonga, in bracteæ basi accreta scaphoidea recepta, stylis emarcidis diu coronata, 1-locularis, introrsum rima longitudinali dehiscens fere follicularis v. demum sub-2-valvis. Semina in placentis 2 parietalibus numerosa.—Caulis adnatus crassus, tuberiformis. Folia elongata, e margine lateribusque caulis oriunda, basi dilatata et intus ligulata, simplicia simpliciter pinnatifida v. bis terve pinnatisecta, rhachi præter lobos majores sæpe lobis parvis numerosis appendiculata. Spicæ cauli adnato affixæ, pedunculatæ, foliis parum v. multo breviores ; bracteæ floriferæ circa rhachin ∞-seriatæ, in spica juniore dense imbricatæ, post anthesin laxiores, semper tamen flores et fructus obtegentes ; scapus sub spica nudus v. papillis v. squamellis velatus.

Species editæ 9, forte ad 6 reducendæ, Madagascariæ et Africæ austro-orientalis incolæ. *Wedd. in DC. Prod.* xvii. 86. *A. Juss. in Deless. Ic. Sel.* iii. *t.* 91 *ad* 94. *Klotzsch in Peters, Mossamb. Bot. t.* 52, 53.

ORDO CXXXVI. NEPENTHACEÆ.

Endl. Gen. 345. Lindl. Veg. Kingd. 287.

Flores dioici. *Perianthium* simplex, 4- rarius 3-partitum, segmentis oblongis patentibus extus pubescentibus intus glandulosis 2-seriatim imbricatis a basi distinctis v. rarissime in flore ♀ in tubum obconicum basi connatis. *Discus* 0. Fl. ♂ : *Stamina* 4–16, filamentis in columnam teretem connatis ; antheræ in capitulum connatæ, 1-seriatæ v. paucæ in capitulo altius irregulariter insertæ sub-2-seriatæ, 2-loculares, loculis parallelis contiguis rima longitudinali extrorsum dehiscentibus rectis v. flexuosis. *Ovarii* rudimentum 0. Fl. ♀ : *Staminodia* 0. *Ovarium* superum, ovoideum v. oblongum, 4- rarius 3-gonum, basi et apice truncatum v. attenuatum, rarissime apice intruso 3-lobum, 4- rarius 3-loculare, carpellis segmentis perianthii oppositis ; stylus 0, stigmate discoideo 4- rarius 3-lobo, lobis integris v. 2-lobis. *Ovula* perplurima, placentis parietibus septorum affixis ∞-seriatim affixa, adscendentia, anatropa. *Capsula* coriacea, 4- rarius 3-gona, truncata v. rarissime apice 3-loba, loculicide 4- rarius 3-valvis ; valvæ coriaceæ, medio septiferæ, lobis stigmatis simplicibus 2-lobisve coronatæ. *Semina* perplurima, septis utrinque affixa, adscendentia, imbricata, funiculo inconspicuo, umbilico prope basin nuclei minuti ovoidei, raphe filiformi intra testæ basin adscendente libera, testa membranacea sæpissime utrinque in caudem capillarem producta. *Embryo* in axi albuminis carnosi rectus ; cotyledones lineares, radicula teres, brevis, infera ; germinatio epigæa.

Suffrutices fruticesve glabri v. parce pilosi, vasis spiralibus ubique repleti. Caules prostrati v. sarmentosi et ope cirrhorum ad apices foliorum oriendorum scandentes, interdum longissimi, parce ramosi, cylindracei v. obtuse 3-goni. Folia alterna, exstipulata, sessilia v. in petiolum alatum angustata, plus minus amplexicaulia, nervis longitudinalibus paucis parallelis margine approximatis a basi costæ sæpius oriundis, venis transversis perplurimis per totam longitudinem costæ egredientibus; costa valida in cirrhum simplicem apice in ascidium operculo auctum desinens producto. Ascidia forma varia, ad apicem cirrhi decurvi v. penduli recurvo-erecta, in foliis inferioribus sæpius ampullacea, in

senioribus angustiora, 3-costata et nervis longitudinalibus numerosis percursa; costa postica infra insertionem operculi in calcar simplex v. 2-3-fidum rarius in setis solutum producta; superficies interna ascidii superne cæruleo-glauca opaca eglandulosa, inferne raro tota nitida et glandulis lympham copiosam aquosam secernentibus operta; os ascidii peristomio nitido cylindraceo v. dilatato sæpissime transversim annulato costato v. sulcato cinctum; operculum in ore ascidii articulatum, primum os claudens, demum ascendens erectum v. rarissimo refractum, extus glabrum v. pubescens, intus glandulosum. Inflorescentia racemosa, simplex v. composita, v. paniculata, tandem succrescente caule lateralis. Flores parvi, virescentes, siccitate atro-brunnei v. purpurei.

Species bene notæ 31, Asiæ tropicæ, Madagascariæ, ins. Seychellarum, Australiæ tropicæ et Novæ Caledoniæ, sed præsertim Archipelagi Malayani incolæ.

Genus unicum, nulli arcte affine etsi characteribus pluribus *Aristolochiaceis* et *Cytinaceis* accedat, habitu et œconomia distinctissimum. De anatomia, organographia et physiologia confer opuscula et tractatus numerosa in DC. Prod. xvii. 91 citata.

GENUS UNICUM.

1. **Nepenthes,** *Linn. Gen. n.* 1019 (Phyllamphora, *Lour. Fl. Cochinch.* 606). Character ordinis.

Species uti supra 31. *Hook. f. in DC. Prod.* xvii. 91, ubi genus in sectiones 2 dividitur:—

1 *Anurosperma.* Semina ovoidea, testa inappendiculata. Perianthii floris ♀ tubus obconicus, limbus 3-4-fidus. Ovarium obpyramidatum, vertice 3-4-lobo depresso, lobis apice introrsum stigmatosis. Species 1, ex ins. Seychellarum. *P. Wright in Trans. Roy. Irish Acad.* xxiv. *t.* 29, 30.

2. *Eunepenthes.* Semina nucleo ovoideo, testa utrinque in caudam elongatam sæpe longissimam capillarem producta. Perianthii floris ♀ segmenta patentia. Ovarium oblongum v. fusiforme, apice integrum, stigmate discoideo latiore coronatum. Species includit omnes cæteras generis. *Gærtn. Fruct.* ii. *t.* 83. *Brongn. in Ann. Sc. Nat. ser.* 1, i. *t.* 5. *Nees in Ann. Sc. Nat. ser.* 1, iii. *t.* 19, 20. *Korth. Verh. Nat. Geschied. t.* 1 *ad* 4, 20 *ad* 22. *Miq. Illustr. Fl. Archip. t.* 1 *ad* 6, *et Journ. Bot. Neerl. t.* 1, 2. *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 1. *Vriese, Tuinb. Fl. t.* 9, 10. *Hook. f. in Trans. Linn. Soc.* xxii. *t.* 69 *ad* 74. *Hook. Ic. Pl. t.* 888. *Bot. Mag. t.* 2798, 4285, 5080, 5109. *Fl. des Serres, t.* 213, *ic. a Bot. Mag. repetita et ic. plur. in Diariis Hortul. recent.*

Ordo CXXXVII. **CYTINACEÆ.**

Cytinaceæ et Rafflesiaceæ, R. Br. Endl. Gen. 75. Lindl. Veg. Kingd. 91, 93. Solms-Laub. in Bot. Zeit. 1874, 337, et in Mart. Fl. Bras. iv. ii. 117.

Flores regulares, unisexuales v. hermaphroditi. *Perianthium* simplex, carnosum, cylindraceo-clavatum globosum v. campanulatum, tubo basi ovario adnato v. in fl. ♂ solido, supra ovarium sæpius producto, limbus 3-10-partitus, segmentis simplici v. duplici serie imbricatis v. valvatis. *Stamina* 8-∞; antheræ circa columnam genitalem centralem carnosam v. ad faucem perianthii sessiles, 2-loculares, loculis rima longitudinali v. poro terminali dehiscentibus; pollen globosum v. 3-lobum, sæpe viscosum. *Ovarium* inferum rarissime semisuperum, 1-loculare v. placentis multilamellatis varie intricatis imperfecte multilocellatum, stigma indivisum discoideum v. lobatum v. stigmata ∞ in vertice ovarii v. columnæ genitalis sessilia. *Ovula* numerosissima, placentas parietales v. ab apice loculi pendulas undique obtegentia, subsessilia et orthotropa v. a funiculo pendula et anatropa, integumento unico. *Fructus* carnosus, apice perianthii parte superiore decidua nudus v. limbo marcescente coronatus, 1-locularis sed sæpe placentis intricato-ramosissimis repletus, indehiscens v. irregulariter ruptus. *Semina* minuta, numerosissima, placentas parum prominulas obtegentia v. placentarum ramis intricatis quasi immixta; testa

cellulosa. *Albumen* cellulosum, embryonem minutum breviter dicotyledoneum fovens, haud raro tamen nucleus induratus, et nisi diligentissime observetur homogeneus videtur embryone difficillime detecto.

Herbæ parasiticæ, carnosæ, squamis sparsis v. imbricatis instructæ v. omnino aphyllæ, ad florem unicum subsessilem reductæ, v. caule plus minus evoluto ∞-floræ, floribus in spicam terminalem confertis sessilibus.

Species ad 22, per regiones calidas et temperatas Europæ australis Africæ et Americæ v. per plagas humidas tropicas Asiæ sparsæ, in radicibus v. ramis fruticum v. arborum variorum innato-parasiticæ.

Ordo jam diu *Aristolochiaceis* et *Nepenthaceis* non sine causa approximatus, ab utroque tamen distinctissimus, tam habitu quam characteribus carpologicis. Nulli alii ordini accedere videtur.

CONSPECTUS GENERUM.

Tribus I. Rafflesieæ. Squamæ sparsæ v. imbricatæ. Flores sæpissime abortu unisexuales Perianthii segmenta 4–10, imbricata v. rarissime valvata. Antheræ circa columnam genitalem 1–3-seriatim verticillatæ. Stigmata 1–∞, vertice columnæ sessilia.

* *Caulis evolutus, squamis sparsis, floribus ∞ spicatis.*

1. Cytinus. Antheræ 8–10 ad apicem columnæ 1-seriatim verticillatæ, loculis longitudinaliter dehiscentibus. Stigma terminale, integrum v. brevissime radiato-lobatum. Baccæ placentæ parietales valde intrusæ.—*Reg. Mediterr., Afr. austr., Mexico.*

** *Flos solitarius parvus, in rhizomate sessilis, bracteis imbricatis ovario basi adnatis perianthii segmentis subsimilibus stipatus.*

2. Apodanthes. Antheræ ∞, circa basin v. infra apicem columnæ 1–3-seriatim verticillatæ, poro terminali dehiscentes. Stigma terminale, obtusum v. concavum. Placentæ parietales, latæ, sæpe continuæ, parum prominentes.—*Mexico, Amer. austr. trop. et extratrop., Afr. trop., Oriens.*

*** *Flos solitarius magnus, in rhizomate sessilis, bracteis imbricatis basi ovario adnatis perianthii lobis valde dissimilibus stipatus.*

3. Rafflesia. Perianthii lobi 5, lati, imbricati. Antheræ circa columnæ collum serie simplici cavis reconditæ, globosæ, poro unico dehiscentes. Stigmata in vertice explanato columnæ ∞, conica.—*Archip. Malay.*

4. Brugmansia. Perianthii lobi 5–6, 2–3-fidi, induplicatim valvati. Antheræ circa columnæ basin simplici serie dense verticillatæ, poris 2 superpositis dehiscentes. Stigma in vertice columnæ indivisum.—*Archip. Malay.*

5. Sapria. Perianthii lobi 10, duplici serie imbricati. Antheræ circa columnæ basin simplici serie verticillatæ, poro unico dehiscentes. Stigma in centro disci columnam terminantis unicum, conicum.—*Bengala orient.*

Tribus II. Hydnoreæ. Squamæ 0. Flos hermaphroditus, in rhizomate solitarius, subsessilis, majusculus. Perianthium crassissimum, valvatim 3–4-lobum. Antheræ ad faucem in massas 3–4 subcontinuas sessilesque confertæ. Stigma in vertice ovarii sessile, disciforme, tubo perianthii inclusum.

6. Hydnora. Antherarum massæ ad faucem annulum continuum formantes. Placentæ ab apice loculi pendulæ, a parietibus liberæ.—*Afr. austr. et trop.*

7. Prosopanche. Antheræ in massam ovoideam confertæ, faucem claudentes. Placentæ parietales, ab apice loculi liberæ.—*Amer. austr. extratrop.*

GENUS EXCLUSUM.

Thismia, Griff. (Sarcosiphon, Blume) a Lindleyo dubie *Cytinaceis* adscripta, inter *Monocotyledones* quærenda est juxta **Burmanniaceas.**

TRIBUS I. RAFFLESIEÆ.

1. **Cytinus**, *Linn. Gen. n.* 1232. (Thyrsine, *Gleditsch, Syst. Pl.* 286.)—**Flores** monoici v. dioici. Perianthii tubus in fl. ♂ solidus, in fl. ♀ ovario adnatus, limbus campanulatus, lobis 4–9 2-seriatim v. contorto-imbricatis. Fl. ♂: Antheræ 8–10, ad apicem columnæ centralis 1-seriatim verticillatæ, adnatæ, extrorsum 2-loculares, loculis parallelis contiguis rima longitudinali dehiscentibus, connectivis ultra loculos sæpius in appendices breves liberas productis. Fl. ♀: Ovarium inferum, 1-loculare; stylus columnaris, stigmate terminali globoso sulcato apice obtuso v. brevissime radiatim lobato; ovula numerosissima, placentas 8–14 parietales valde intrusas undique obtegentia, orthotropa. **Fructus** baccatus. Semina minima, testa duriuscula; embryo in apice albuminis indurati cellulosi minutus.—Herbæ coloratæ, subcarnosæ, in radicibus parasiticæ. Caules breves, crassi, simplices, squamis alternis coloratis instructi. Flores in spicam terminalem simplicem dispositi, singuli ad axillam bracteæ sessiles v. breviter pedicellati, bracteolis 2 oppositis stipati v. ebracteolati. Flores mediocres.

Species 4, regionis Mediterraneæ, Africæ australis et Mexici incolæ.—*Hook. f. in DC. Prod.* xvii. 107.

Genus jam a R. Br. in Trans. Linn. Soc. xix. 245, bene definitum, ab auctoribus nonnullis in genera 3 dividitur, inter se patria et quodammodo characteribus distincta, sed melius pro sectionibus retinenda: 1. Species typica Mediterranea, in *Cistaceis* parasitica, floribus monoicis 4-meris 2-bracteolatis. *Cav. Ic. t.* 171. *Trattin. Thes. Bot. t.* 29. *Brot. Phytogr. Lusit. t.* 51. *Hook. Exot. Fl. t.* 153. *Reichb. Ic. Fl. Germ. t.* 540. *Sibth. Fl. Gr. t.* 938.

2. *Hypolepis*. Species Capensis, in *Eriocephalo* parasitica, floribus dioicis 6-meris 2-bracteolatis. *Hook. Ic. Pl. t.* 336. PHELYPÆA. *Thunb. Nov. Gen. Pl.* 91, *non Desf.* HYPOLEPIS, *Pers. Syn. Pl.* ii. 598.

3. *Bdallophyton*. Species 2, Mexicanæ, dioicæ, floribus 4–5-meris ebracteolatis. *A. Gray in Proc. Amer. Acad.* v. 188. BDALLOPHYTON, *Eichl. in Bot. Zeit.* 1872, 709, *t.* 8, *in DC. Prod.* xvii. 301 ad *Cytinum* reductum.

Seminis *Cytini* nucleus, in sicco observatus, homogeneus videtur, itaque fere ab omnibus botanicis descriptus est, sed ex observationibus ad vivum diligenter institutis a Gasparrini in Parlat. Giorn. Bot. Ital. ii. 7, t. 1, et serius accuratiusque in Rendic. Accad. Sc. Nap. i. 188, cum tab. editis, embryo minimus ac distinctus in apice albuminis cellulosi includitur. Confer etiam Solms-Laubach in Bot. Zeit. 1874, 369, t. 8, f. 12, qui stratum unicum cellularum albuminis circa embryonem invenit, cui tamen verisimiliter observationes Gasparrinii ignotæ erant.

2. **Apodanthes**, *Poit. in Ann. Sc. Nat. ser.* 1, iii. 422, *t.* 26, *f.* 1. (Pilostyles, *Guillem. in Ann. Sc. Nat. ser.* 2, ii. 21, *t.* 1. Frostia, *Berter. in Endl. Gen.* 76. Sarna, *Karst. in Nov. Act. Nat. Cur.* xxvi. 920, *t.* 65.)—Flores dioici. Perianthii tubus in fl. ♂ solidus, in fl. ♀ ovario adnatus, ovoideus v. globosus, ultra ovarium non productus; limbus 4–6-partitus, segmentis 1-seriatim imbricatis interdum squamis bracteantibus subsimilibus. Discus epigynus carnosus, columnam genitalium cingens. Fl. ♂ (ubi noti): Columna apice incrassata v. dilatata, plana v. convexiuscula, margine pilosa; antheræ numerosæ, circa basin v. infra apicem columnæ sessiles, 1–3-seriatim verticillatæ, 1-loculares, poro unico apice extrorsum dehiscentes. Fl. ♀: Ovarium inferum v. rarius semiinferum, 1-loculare. Discus epigynus carnosus, cum stylo brevi conico v. vix distincto continuus, vertice stigmatoso obtuso conico v. subgloboso medio sæpe intruso; ovula numerosissima, anatropa, placentas parietales (sæpius 4) latas interdum confluentes undique obtegentia. Bacca squamis perianthiique segmentis persistentibus circumdata. Semina minuta, testa reticulata, albumine celluloso (e strato unico cellularum, *Solms-Laub.*).—Planta tota parva v. minima, flore e rhizomate innato solitario sessili. Squamæ seu bracteæ basi ovario adnatæ, irregulariter v. subregulariter pauciseriatim imbricatæ, perianthii segmentis subsimiles, interiores iis approximatæ v. bene distantes.

Species descriptæ 10, in ramis fruticum parasiticæ, per varias regiones imprimis Americæ, Africæ et Orientis dispersæ. *Hook. f. in DC. Prod.* xvii. 113. *Gardn. in Hook. Ic. Pl. t.* 655. *Wedd. in*

Trans. Linn. Soc. xxvii. 67, t. 22. *Torr. Bot. Emory Exped.* t. 52. *Solms-Laub. in Mart. Fl Bras.* iv. ii. 122, t. 27. *Boiss. Fl. Or.* iv. 1072 (*Syn. plura sub Pilostyli*).

In specie typica *Apodanthe* Guianensi in *Casearia* parasitica, et in *Sarna*, Karst., specie Columbiana in ramis *Flacourtiæ*, flores ♂ ignoti et in flore ♀ perianthii segmenta a bracteis superioribus plus minus distant. Species cæteræ ab auctoribus pluribus sub nomine *Pilostylis* distinguuntur bracteis numerosioribus, superioribus interdum a perianthii segmentis parum distinctis, et ovarii loculo intus tereti nec quadrato; character tamen prior variat de specie in speciem, et ovarii loculus in omnibus specibus ob placentas 4 intus obscure quadratus, in speciminibus nostris *A. caseariæ* certe non acute quadratus ut in ic. Poitæi delineatur.

3. **Rafflesia,** *R. Br. in Trans. Linn. Soc.* xiii. 201, *t.* 15 *ad* 22, xix. 242, *t.* 22 *ad* 26.—Flores dioici. Perianthii carnosi tubus basi hemisphæricus, in fl. ♂ solidus, in fl. ♀ ovario adnatus, supra ovarium late campanulatus; limbus 5-partitus, segmentis 1-seriatim imbricatis latis integris patentibus v. recurvis, fauce corona elevata carnosa cincta. Columna genitalium brevis, lata, crasso-carnosa, annulo simplici v. duplici cincta, vertice in discum explanata, disci superficie stylis v. processubus styliformibus conicis onusta, margine elevato indiviso. Fl. ♂ : Columna infra discum constricta, collo serie simplici antherarum cavis reconditarum circumdato; antheræ globosæ, sessiles, multicellulosæ, poro unico apicali dehiscentes; processus styliformes læves. Fl. ♀ : Columna mari conformis, sed styli (v. stigmata) apice hispido-papillosi et antheræ imperfectæ v. 0. Ovarium inferum, placentis labyrinthiformibus in locellos numerosos divisum; ovula numerosissima, placentas undique obtegentia iisque immixta, anatropa, funiculo elongato extra medium arcte recurvato. Semina numerosissima, minuta, funiculo apice dilatato vix latiora, recurvata, castanea, testa crustacea lacunosa, albumine celluloso (e stratu unico cellularum, *Solms-Laub.*); embryo minutus.—Plantæ carnosæ, flore e rhizomate innato solitario magno nunc giganteo lurido odore cadaverino, intra squamas seu bracteas plures basi ovario adnatas sessili. (*Char. ex ic. et descr. citat. imprimis R. Br. et Blume*).

Species 4, in Archipelago Malayano in radicibus *Vitium* parasiticæ. *Hook. f. in DC. Prod.* xvii. 110. *Beccari, Nuov. Giorn. Bot. Ital.* vii. 71. *Blume, Fl. Jav. Rhiz.* 7, *t.* 1 *ad* 3, *ic. in Fl. des Serres, t.* 1505 *ad* 1508 *iteratæ*. *Miq. Fl. Ind. Bat.* i. ii. *t.* 29, 30; *Analect. Bot. Ind.* iii. *t.* 2, 3. *De Vriese, Mem. Raffl.* 1853, *cum tabb.* 2. *Teschem. in Bost. Journ. Nat. Hist.* iv. *t.* 6, *ic. in Ann. Nat. Hist. ser.* 1, ix. *t.* 6 *iterata*. *Hook. Comp. Bot. Mag.* i. *t.* 14, 15.

4. **Brugmansia,** *Blume in Van Hall, Bijdr. Natuurk. Wetensk,* ii. 422; *Fl. Jav. Rhiz.* 13, *t.* 4 *ad* 6. (Zippelia, *serius* Mycetanthe, *Reichb. ex Endl. Gen. Suppl.* ii. 6.)—Flores dioici v. interdum hermaphroditi. Perianthii carnosi tubus basi ovario adnatus, supra ovarium late campanulatus; limbus 5–6-partitus, segmentis alte 2–3-fidis induplicatim valvatis per anthesin patentibus recurvisve. Columna genitalium apice capitata; capitulum convexum, sulcatum, pilosum, medio constrictum, vertice depressum, margine superiore crenulata. Antheræ numerosæ (40–60), serie simplici sulcis capituli respondente circa ejus basin dense verticillatæ, subglobosæ, connatæ, 2-loculares, sæpissime 2-porosæ, poris superpositis. Ovarium inferum, 1-loculare; stylus crasse columnaris, stigmate capitato indiviso; ovula numerosissima, placentas parietales carnosas indefinite numerosas undique obtegentia, anatropa. Fructus subbaccatus. Semina numerosissima, minuta, obovoidea v. pyriformia, funiculo recurvo.—Plantæ carnosæ, flore e rhizomate innato solitario magno, intra squamas seu bracteas plures imbricatas basi ovario adnatas subsessili. (*Char. imprimis ex ic. et descr. Blume*).

Species 2, in Archipelago Malayano in radicibus *Vitium* parasiticæ. *Hook. f. in DC. Prod.* xvii. 113. *Beccari in Nuov. Giorn. Bot. Ital.* i. 85, *t.* 5, vii. 74.

5. **Sapria,** *Grif. in Trans. Linn. Soc.* xix. 314, *t.* 34, 35.—Flores dioici. Perianthii carnosi tubus basi in fl. ♂ solidus, in fl. ♀ ovario adnatus, supra ovarium late campanulatus, intus 20-carinatus; limbus 10-partitus, segmentis duplici serie imbricatis recurvo-patentibus, fauce corona annulari semiclausa. Columna genitalium brevis, basi exannulata, sursum in discum dilatata concavum longe pilosum, centro in stylum v. processum

styliformem unicum c onicum productum. Fl. ♂: Antheræ ad 20, simplici serie ad basin columnæ verticillatæ, sessiles, 2 3-loculares, apice (deorsum spectante) 1-porosæ. Processus terminalis styliformis lævis. Fl. ♀: Antheræ castratæ. Ovarium 1-loculare; stylus seu disci conus bene evolutus papillosus; ovula numerosissima, placentas plures parietales undique obtegentia, anatropa. Fructus magnus, globosus, perianthio indurato coronatus.—Planta carnosa, flore e rhizomate innato solitario magno lurido odore cadaverino, intra bracteas plures oppositas imbricatas basi ovario adnatas sessili. (*Char. ex ic. et descr. Griff.*).

Species 1. in Bengalia maxima orientali, in radicibus truncisque *Vitium* parasitica.—*Hook. f. in DC. Prod.* xvii. 112.

Tribus II. Hydnoreæ.

6. **Hydnora**, *Thunb. in Vetensk. Akad. Handl. Stockh.* 1775, 69, *t.* 2 *fl.*, *et* 1777, 144, *t.* 4 *fr.* (Aphyteia, *Achar. in Linn. Amœn. Acad.* viii. 310, *t.* 7.)—Flores hermaphroditi. Perianthium crasso-carnosum, cylindraceo-clavatum, tubo basi ovario adnato supra ovarium producto et sub fauce sæpe contracto; limbus in lobos 3 v. 4 crassissimos valvatim divisus. Antheræ numerosæ, lineari-flexuosæ, ad faucem in annulum sessilem sub 3-4-lobum dense confertæ, loculis parallelis rima longitudinali dehiscentibus. Ovarium inferum, 1-loculare, stigmate sessili lato depresso sub-3-4-lobo striato coronatum; ovula numerosissima, placentas numerosas ab apice loculi pendulas obtegentia. Fructus, perianthii parte libera decidua, subglobosus, crassus, stigmate persistente coronatus, intus placentis auctis in massam intricatam subconcretis repletus. Semina minuta, numerosissima, intra massam placentarum undique intermixta, testa cellulosa. Embryo in albumine copioso subcartilagineo minimus.—Plantæ crasso-carnosæ, aphyllæ, rhizomate in radicibus (præcipue *Cotyledonum* v. *Euphorbiacearum*) parasitico sæpeque innato, cæterum e flore unico majusculo in caulem brevem basi contracto constante. Squamæ nullæ, sed superficies saltem in sicco sæpe areolata, areolis elevatis squamas adnatas simulantibus.

Species editæ 8, sed verisimiliter ulterius comparatæ ad 5 reducendæ, Africæ tropicæ et australis incolæ. *Hook. f. in DC. Prod.* xvii. 109 (subgen. *Euhydnora*). *Dcne. in Bull. Soc. Bot. Fr.* xx. 75. *Beccari in Nuov. Giorn. Bot. Ital.* iii. 5, vii. 70. *R. Br. in Trans. Linn. Soc.* xix. *t.* 27, *ad* 30. *E. Mey. in Nov. Act. Nat. Cur.* xvi. *t.* 58, 59. *Gærtn. Fruct.* ii. *t.* 137. *Trattin. Thes. Bot. t.* 31. *Harv. Thes. Cap. t.* 187. *Wedd. in Ann. Sc. Nat. ser.* 3, xiv. *t.* 8. *Solms-Laub. in Bot. Zeit.* 1874, 385, *t.* 8. qui *Hydnoram* et *Prosopanchem* ob albumen copiosum et habitum in ordinem distinctum a *Cytineis* (*Rafflesiaceis*) separat.

Decaisne l.c. species 2 flore 4-mero a 3-meris distinxit pro sectione sub nomine *Dorhyne*.

7. **Prosopanche**, *De Bary in Abhandl. Naturf. Gesellsch. Halle*, x. 243, *t.* 1, 2.—Flores hermaphroditi. Perianthium crasso-carnosum, cylindraceo-clavatum, tubo basi ovario adnato supra ovarium producto; limbus in lobos 3 crassissimos valvatim divisus. Antheræ numerosæ, lineari-flexuosæ, ad faucem in massam ovoideam 3-dymam subsessilem v. filamentis 3 brevissimis crassis fultam densissime confertæ (stamina 3 antheris polythecis, *Burmeister*), loculis parallele confertis rima longitudinali dehiscentibus; corpuscula 3 sub fauce intra tubum perianthii cordato-2-loba, staminum massis alterna (staminodia, *Burm.*; falso placentæ, *Miers*). Ovarium inferum, 1-loculare etsi placentis fere repletum; stigmate sessili lato depresso 3-sulcato; ovula numerosissima, placentas numerosas parietales lamelliformes loculum implentes undique obtegentia iisque quasi immixta (placentæ 3 multilamellatæ, *Burm.*). Bacca perianthii parte superiore delapsa subglobosa, seminibus numerosissimis placentis irregulariter ramosissimis immixtis repleta. Embryo minimus, in centro albuminis copiosi.—Planta crasso-carnosa, aphylla, *Hydnoræ* simillima e rhizomate flores singulos emittente constans.

Species 1. in America australi extratropica (reipublicæ Argentinæ provinciis interioribus) in radicibus *Prosopidis* parasitica, olim structura interiore imperfecte nota in *Hydnora* inclusa, nunc rite

separata. *Hook. f. in Journ. Linn. Soc.* xiv. 182. *Solms-Laub. in Bot. Zeit.* 1874, 372. *Miers in Trim. Journ. Bot.* 1873, 257, *t.* 135, qui in *Hydnora* retinuit, parte libera perianthii tubi pro ovario descripta, ovario vero ex icone excluso.

Ordo CXXXVIII. ARISTOLOCHIACEÆ.

Endl. Gen. 344. Lindl. Veg. Kingd. 792.

Flores hermaphroditi. *Perianthium* simplex, basi ovario adnatum, supra ovarium varie productum, æqualiter 3-lobum v. irregulariter integrum dentatum v. 3-lobum, lobis valvatis. *Stamina* 6 v. ∞, circa ovarii apicem v. columnam stylarem 1- v. 2-seriatim affixa, filamentis brevibus crassis liberis v. a columna haud distinguendis. *Antheræ* liberæ v. columnæ adnatæ, erectæ, loculis parallelis distinctis, rima longitudinali extrorsum v. staminum exteriorum lateraliter dehiscentibus. *Discus* 0. *Ovarium* inferum v. rarius semisuperum, perfecte v. imperfecte 4–6-loculare, placentis a parietibus intrusis in centro ovarii conniventibus v. coalitis. *Styli* in columnam brevem crassam apice in lobos stigmatosos 3-∞ alte breviter v. obscure divisam coaliti. *Ovula* in quoque loculo ∞, sæpe numerosa, anatropa, horizontalia v. pendula, in series 1 v. 2 superposita. *Capsula* nunc perianthio persistente coronata putrefactione sola aperiens, nunc sæpius perianthii parte supera decidua septicide v. placenticide dehiscens. *Semina* in loculis ∞, sæpius numerosa, horizontalia v. pendula, substantia celluloso-spongiosa cum endocarpio continua interdum immersa, ovoidea v. oblonga, obtuse 3-quetra v. compressa et plana v. concava, testa crustacea v. duriuscula rugosa v. lævi, raphe in semine plano-concavo sæpe carnoso-incrassata v. dilatata. *Albumen* copiosum, carnosum. *Embryo* prope hilum albumine inclusum, minimum, oblongum v. ovoideum, cotyledonibus sese applicitis radiculæ subæquilongis.

Herbæ rarius frutices, sæpe volubiles, interdum altissime scandentes, totæ fricatu v. flore solo sæpe fœtentes. Folia alterna, petiolata, sæpe cordata, integerrima v. 3–5-loba. Stipulæ 0. Flores mediocres v. magni rarius parvuli, virentes flavescentes luride purpurascentes v. variegati, terminales axillares v. ad basin caulis laterales, solitarii v. breviter cymosi v. racemosi. Bracteæ variæ, sæpe desunt.

Species ad 200, per regiones temperatas calidioresque totius fere orbis late dispersæ, temperatas præcipue in hemisphærio boreali.

Ordo nulli prope accedit, olim cum *Dioscorideis* comparatus et, uti *Piperaceæ*, caulis anatomia ei Monocotyledonearum approximatur, sed embryo in utroque ordine certe dicotyledoneus.

CONSPECTUS GENERUM.

1. Asarum. Ovarium inferum v. semisuperum, hemisphæricum v. subglobosum. Perianthium supra ovarium 3-lobum, æquale, persistens. Stamina circa stylum 12, 2-seriata, antheris liberis.—*Eur.*, *Asia temp.*, *Amer. bor.*

2. Bragantia. Ovarium inferum, lineare, stipitiforme. Perianthium 3-lobum, æquale, supra ovarium articulatum, deciduum. Stamina circa stylum simplici serie 6–12, libera v. basi stylo adnata.—*Ind. or.*, *Archip. Malay.*

3. Thottea. Ovarium inferum, lineare, stipitiforme. Perianthium 3-lobum, æquale, supra ovarium articulatum, deciduum. Stamina circa stylum duplici serie numerosa, libera v. basi stylo adnata.—*Archip. et Penins. Malay.*

4. Holostylis. Ovarium inferum, lineare, stipitiforme. Perianthium irregulare, supra ovarium articulatum, deciduum, oblique campanulatum, supra genitalia haud constrictum. Antheræ 6, columnæ stylari 1-seriatim adnatæ.—*Brasilia.*

5. Aristolochia. Ovarium inferum, lineare oblongum v. obovoideum. Perianthium irregulare, polymorphum, supra ovarium articulatum, deciduum, circa genitalia utriculosum, supra

genitalia plus minus constrictum. Antheræ 6–∞, columnæ stylari 1-seriatim adnatæ.—*Orbis utriusque reg. calid. et temp.*

GENUS EXCLUSUM.

TRICHOPODIUM, Lindl., ab auctore *Aristolochiaceis* adscriptum ad **Dioscorideas** pertinet.

1. **Asarum,** *Linn. Gen. n.* 589. (Heterotropa, *Morr. et Dcne. in Ann. Sc. Nat. ser.* 2, ii. 314, *t.* 10.)—Perianthium basi ovario adnatum, subhemisphæricum, supra ovarium late campanulatum v. urceolatum, fauce varie constricta v. aperta, lobis 3 (rarius 4 ?) æqualibus valvatis. Stamina 12 (rarius 8 ?), ovario 2-seriatim affixa eique interdum breviter adnata, filamentis crassiusculis v. brevissimis; antherarum loculi extrorsum v. seriei exterioris sublateraliter dehiscentes, connectivo ultra loculos varie producto. Ovarium inferum semi-inferum v. basi tantum leviter immersum, subglobosum v. vertice planum, imperfecte v. perfecte 6- rarius 4-loculare, placentis parietalibus valde intrusis, in centro dilatatis et sæpe contiguis v. interdum coalitis; styli 6 rarius 4, crassiusculi, liberi v. plus minus in columnam connati, superne introrsum stigmatosi; ovula in quoque loculo ∞, 2-seriatim superposita, horizontalia v. pendentia. Capsula coriacea, semi-infera v. infera, perianthio staminibusque persistentibus coronata, putrefactione aperta. Semina oblonga, complanata, facie interna valde concava marginibus fere involutis, raphe carnosa percursa; albumen et embryo ad normam ordinis.—Herbæ perennes, caudicibus repentibus quotannis caules plerumque brevissimos 1–3-squamatos et folia 1–2 gerentes emittentibus. Folia longe petiolata, cordata reniformia v. subhastata. Flores terminales, solitarii, breviter pedunculati. Perianthium saltem intus fusco-purpureum v. luridum, lobis obtusis acutis v. caudato-acuminatis.

Species notæ 13, regionum temperatarum hemisphærii borealis incolæ, scil. 4 Americanæ, 1 Europæa, 1 Himalaica, 7 Asiaticæ orientales v. Japonicæ. *Duch. in DC. Prod.* xv. i. 422. *Maxim. in Bull. Acad. Petersb.* xvii. 162; *Mel. Biol.* viii. 395. *Reichb. Ic. Fl. Germ. t.* 668. *Nees, Gen. Fl. Germ. Monochlam. n.* 51. *Torr. Fl. N. York, t.* 92. *Field et Gardn. Sert. Pl. t.* 32. *Hook. Exot. Fl. t.* 40. *Bot. Mag. t.* 2769, 3746, 4933, 5380. *Sweet, Brit. Fl. Gard. t.* 18, 95. *Lodd. Bot. Cab. t.* 889. *Reg. Gartenfl. t.* 440.

Genus distinctissimum, habitu subuniforme, variat de specie in speciem perianthio ad faucem varie constricto v. nudo, ovario apice plus minus libero, staminibus stylisque majus minusve evolutis liberis v. connatis, vix tamen in sectiones distinctas dividendum.

2. **Bragantia,** *Lour. Fl. Coch.* 528. (Apama, *Lam. Dict.* i. 91. Ceramium, *Blum. Bijdr.* 1134, *nomen mutatum in* Vanhallia, *Roem. et Schult. Syst.* vii. 18, *v. in* Munnickia, *Reichb. Consp.* 85. Trimeriza, *Lindl. Bot. Reg. sub. t.* 1543. Asiphonia, *Griff. in Trans. Linn. Soc.* xix. 333, *t.* 37. Strakæa, *Presl, Epimel. Bot.* 221. Cyclodiscus, *Klotzsch in Monatsber. Acad. Berlin,* 1859, 591.)—Perianthium basi ovario adnatum, lineare, stipitiforme, supra ovarium articulatum, late campanulatum, 3-fidum, fauce aperta quandoque intus annulata, lobis valvatis æqualibus. Stamina 6–12, simplici serie stylum cingentia, filamentis brevibus subnullisve liberis v. varie coalitis; antherarum loculi connectivo crassiusculo ultra loculos brevissime et obtuse producto extrorsum adnati. Ovarium inferum, 4-loculare; stylus supra ovarium breviter v. brevissime lateque integer, in lobos 3–∞ stigmatosos sæpius lineares divisus; ovula in loculis numerosa, 2-seriatim superposita, pendula. Capsula perianthio deciduo apice nudata, longe linearis, 4-gona, septicido 4-valvis, placentam centralem 4-angulatam (an semper ?) relinquens. Semina oblongo-3-gona, testa crustacea v. duriuscula rugosa, substantia celluloso-spongiosa cum placenta continua sæpe involuta; albumen et embryo ad normam ordinis.—Frutices suffruticesve parum ramosi, tomentosi v. glabrati. Folia alterna, breviter petiolata, 3–5-nervia, penninervia. Flores quam in *Thottea* multo minores, in una specie ad apices ramorum laxe cymoso-corymbosi, in altera ad axillas pauci breviter cymosi, in tertia prope basin caulis racemosi. Capsula sæpius pluripollicares.

Species adsunt 3 (v. 4 ?) præter typicam Loureireanam nobis ignotam, Indiæ orientalis et Archipelagi Malayani incolæ.—*Duch. in DC. Prod.* xvi. i. 429. *Benn. Pl. Jav. Rar. t.* 11. *Wight, Ic. t.* 520.

Species singulæ inter se differunt inflorescentia, staminum styliqne ramorum numero, vix tamen commode pro sectionibus monotypicis habendæ. *Strakæa melastomifolia*, Presl, est certe eadem ac *B. corymbosa*, Griff. Nomen genericum Lamarckianum jure prioritatis gaudet, futile tamen erit hodie rejicere Loureireanum jam diu ab omnibus botanicis receptum.

3. **Thottea,** *Rottb. in Dansk. Vidensk. Selsk. Skrift. ser.* 2, ii. 529, *t.* 2. (Lobbia, *Planch. in Hook. Lond. Journ.* vi. 144, *t.* 3.)—Perianthium basi ovario adnatum, lineare, stipitiforme, supra ovarium articulatum, late campanulatum v. urceolatum, 3-fidum, fauce aperta v. vix contracta, lobis valvatis æqualibus. Stamina ∞, sæpius numerosa, duplici serie stylum cingentia eique sæpius breviter adnata, filamentis brevissimis ; antherarum loculi connectivo latiusculo ultra loculos haud producto extrorsum adnati. Ovarium inferum, subperfecte 4-loculare, placentis in centro contiguis at vix coalitis ; stylus supra ovarium breviter lateque integer, in lobos crassiusculos obtusos 5–20 stigmatosos divisus ; ovula in loculis numerosa, 2-seriatim superposita, pendula. Capsula perianthio deciduo apice nudata, longe lineari-4-gona, septicide 4-valvis, margines placentiferas filiformes (an semper ?) liberans. Semina oblongo-3-gona, testa crustacea duriuscula elevato-rugosa, substantia celluloso-spongiosa continua plus minus involuta ; albumen et embryo ad normam ordinis.—Frutices erecti v. sarmentosi, ferrugineo-tomentosi v. glabrati. Folia alterna, breviter petiolata, ampla, coriacea, pennivenia, reticulato-venulosa basique sæpius plus minus distincte 3–5-nervia. Flores mediocres v. magni, ad axillas breviter cymosi, v. (in specie Beccariana a nobis non visa) ad basin caulis racemosi. Capsulæ sæpe semipedales.

Species 5, Peninsulæ et Archipelagi Malayani incolæ. *Duch. in DC. Prod.* xv. i. 428. *Griff. in Trans. Linn. Soc.* xix. *t.* 36. *Beccari in Nuov. Giorn. Bot.* ii. i. *t.* 1. (Spec. 1 Maingayana adhuc inedita).

T. grandiflora, Rottb., a cæteris differt floribus magnis, cymæ ramis 2-3 longiusculis, sed nequaquam a cæteris pro sectione separanda. Ovula in omnibus speciebus pendula, errore pictoris in *T. dependente* erecta delineata. Genus *Bragantiæ* valde affine, vix differt floribus majoribus et staminibus 2-seriatis.

4. **Holostylis,** *Duchartre in Ann. Sc. Nat. ser.* 4, ii. 33, *t.* 5, *et in DC. Prod.* xv. i. 431.—Perianthium basi ovario adnatum, lineare, stipitiforme, supra ovarium articulatum, latissime et oblique campanulatum, supra genitalia intus annulatum, extus tamen haud constrictum. Stamina 6, filamentis connectivisque a columna stylari non distinctis ; antheræ circa columnam 1-seriatim adnatæ, loculis extrorsum dehiscentibus. Ovarium inferum, perfecte 6-loculare ; columna stylaris cylindracea, crassa, apice in discum concavum crenatum v. breviter lobatum supra vel introrsum stigmatosum dilatata ; ovula in loculis ∞, horizontalia, superposita. Capsula oblonga, septicide 6-valvis, placentis linearibus marginibus valvularum adhærentibus v. demum liberatis. Semina horizontalia, obovata, plano-compressa, marginibus obtusis, raphe ventrali in alam crassam carnosam semini ipsi æquilatam dilatata, testa tenuiter crustacea lævi ; albumen et embryo ad normam ordinis.—Herba e caudice perenni subsimplex. Folia pauca, magna, reniformia, pedatim 5–9-nervia. Flores in caulibus radicalibus aphyllis v. apice demum foliatis pauci, dissiti, breviter pedicellati, bractea parva subtensi.

Species 1, Brasiliensis. *Mast. in Mart. Fl. Bras.* iv. ii. 81, *t.* 17. Genus vix ac ne vix ab *Aristolochia* perianthii forma distinctum.

5. **Aristolochia,** *Linn. Gen. n.* 1022.—Perianthium basi ovario adnatum, lineare oblongum v. obovoideum, supra ovarium plus minus distincte articulatum sæpeque externe gibbis 1–6 appendiculatum, circa genitalia utriculosum globosum v. oblongum, supra genitalia constrictum v. varie contractum intusque sæpe annulatum v. appendice annulari reflexa instructum, superne tubulosum rectum curvum reduplicatum v. varie flexuosum, apice in limbum quam maxime varium, integrum 1–2-labiatum 3-lobum v. 1–3-caudatum expansum. Stamina 6, rarius 4 v. 10–∞, circa columnam stylarem 1-seriata, filamentis connectivisque a columna haud distinctis ; antheræ columnæ adnatæ, loculis extrorsum dehiscentibus. Ovarium inferum, imperfecte v. perfecte 6- rarius 5- v. 4-loculare, placentis

parietalibus nunc parum prominulis nunc sæpius in centro ovarii conniventibus v. coalitis; stylus v. columna stylaris brevis, crassus, superne in lobos stigmatosos 3 v. 6 rarius ∞, crassos obtusos v. rarius lineares v. brevissimos divisus; ovula ∞, in loculis 2-seriatim v. in placentis parietalibus utrinque 1-seriatim superposita. Capsula apice perianthio deciduo denudata, a basi ad apicem v. rarius ab apice basin versus septicide v. placenticide 6-valvis rarius 5- v. 4-valvis. Semina sæpius numerosa, horizontalia, obovata, compressa, plana v. sæpius facie concava ibidemque raphe carnosa percursa, extus lævia v. tuberculato-rugosa, haud raro substantia celluloso-spongiosa immersa, testa crustacea v. indurata; albumen et embryo ad normam ordinis.—Herbæ rhizomate perenni seu tuberosa v. frutices sæpe volubiles interdum altissime scandentes, rarissime arborescentes. Folia alterna, sæpius petiolata, integerrima v. 3-5-loba, sæpe basi cordata et 5-7-nervia. Pedunculi axillares, 1-flori, solitarii fasciculati v. breviter racemosi. Bractea 0, v. ad basin pedunculi stipulam simulans, v. in medio pedunculo sub ovario unica. Perianthium viride flavescens luridum v. variegatum, forma et magnitudine quam maxime varians, nunc infrapollicare tenuisque nunc 2-pedale superne latissimum. Planta tota fricatu v. flores sæpius fœtentes.

Species ad 180. per regiones calidiores temperatasque totius fere orbis late dispersæ, aliæ in locis cultis frequentes, plurimæ tamen ad aream parvam limitatæ v. rarissimæ.—*Duch. in Ann. Sc. Nat. ser.* 4, ii. 29, *t.* 5, 6, *et in DC. Prod.* xv. i. 433. *Cham. et Schl. in Linnæa*, vii. *t.* 5, 6. *Klotzsch in Monatsb. Acad. Berl.* 1859, 593, *t.* 2 (*tribus Aristolochiaceæ*). *Boiss. Fl. Or.* iv. 1075. *Griseb. Symb. Fl. Argent.* 148.

Genus naturalissimum, etsi perianthii forma quam maxime varium, a Duchartreo anno 1854 in sectiones, imprimis ad gynostegii indolem bene definitas et areæ geographicæ convenientes etsi non semper habitu nec aliis characteribus distinctas, bene divisit. Klotzsch, anno 1859, tentamen Duchartrei negligens v. forte ejus inscius, fere easdem sectiones sub aliis nominibus pro generibus propriis constituit. His postea addendæ sunt species quædam Africanæ sectionem novam constituentes, et genus nobis dividendum videtur in sectiones 4, characteribus Duchartreanis limitandas; cæteras ab hoc auctore propositas ad subsectiones reducimus.

1. *Diplolobus*, Duch. Columna stylaris 6-loba, infra lobos supra antheras annulo prominulo cincta. Antheræ 6, circa columnam æquidistantes, lobis oppositæ. Perianthii tubus rectus incurvus v. flexuosus, limbus sæpius 1-labiatus, rarius periphericus utrinque subæqualis. Species ultra 40, omnes gerontogeæ. *Reichb. Ic. Fl. Germ. t.* 669 *ad* 672. *Nees, Gen. Fl. Germ. Monochlam. n.* 50. *Hayne, Arzneigew.* ix. *t.* 20, 22 *ad* 24. *Waldst. et Kit. Pl. Rar. Hung. t.* 240. *Sibth. Fl. Gr. t.* 934 *ad* 937. *Desf. in Ann. Mus. Par.* x. *t.* 18, 19; *Fl. Atl. t.* 249, 250. *Jaub. et Spach, Ill. Pl. Or. t.* 97 *ad* 100, 127 *ad* 129. *Moggr. Fl. Ment. t.* 64, 87. *Bot. Mag. t.* 1115, 1116.

Genus *Aristolochia* a Klotzsch in Monatsber. Acad. Berl. 1859, 593, ad hanc sectionem limitatur, et icones supra citatæ ad subsectionem typicam pertinent, perianthii utriculo immediate supra ovarium posito. In speciebus pluribus Asiaticis v. Mascarensibus perianthii tubus inter ovarium et utriculum plus minus productus stipitiformis, et subsectionem *Podanthemum*, Kl., formant. Huc referendæ Wight, Ic. t. 771 et 1858. Subsectio *Acerostylis*, Duch., species v. varietates 2 continet ex Africa orientali, columna stylari apice minus distincte lobata, annulo sub apice latiore. Huc pertinent specimina a Schweinfurthio recepta sub nomine *A. rigidæ*, Duch., aliaque floribus minoribus ab Olivero in Hook. Ic. Pl. t. 1273 sub nomine *A. somaliensis* edita, quæ forte melius quam Schweinfurthiana cum dimensionibus a Duchartreo datis quadrant. Annulus infra lobos styli in hac sectione a Duchartreo margine stigmatosus dicitur, quod tamen vix confirmare possumus. Papillæ stigmatosæ potius ad apicem columnæ sitæ videntur.

2. *Polyanthera*. Columna stylaris apice 10-20-loba, lobis integris 2-fidisve, infra lobos exannulata. Antheræ 10-24, circa columnam arcte approximatæ. Perianthium magnum, limbo nunc maximo (2-pedali latoque) remote subulato 3-dentato, nunc 3-fido lobis acutis v. longissime caudatis. Species 4, Africæ tropicæ occidentalis incolæ. *Hook. f. in Trans. Linn. Soc.* xxv. 185, *t.* 14. *Bot. Mag. t.* 5672. *Mast. in Gard. Chron.* 1879, i. 494.

3. *Gymnolobus*, Duch. Columna stylaris apice æqualiter 6- rarius 5-loba, infra lobos exannulata; antheræ 6, rarius 5, circa columnam æquidistantes, lobis oppositæ. Perianthium varium, mediocre, rarius parvulum, sæpe magnum nunc maximum, limbo 1-labiato, 2-labiato v. rarius peripherico. Species ad 100, omnes Americanæ. *Mast. in Mart. Fl. Bras.* iv. ii. 82, *t.* 18 *ad* 26. *Jacq. Stirp. Amer. t.* 144 *ad* 146; *Ic. Rar.* t. 188, 608; *Hort. Schænbr. t.* 183, 497. *Jacq. f. Ecl. t.* 26. *Desf. in*

Ann. Mus. Par. ii. *t.* 35. *Vahl, Symb.*, ii. *t.* 47. *H. B. et K. Nov. Gen. et Sp. t.* 110 *ad* 114, 116, 117. *Mart. Nov. Gen. et Sp. Bras. t.* 48 *ad* 54. *Vell. Fl. Flum. Ic.* ix. *t.* 96 *ad* 100. *Karst. Ausw. Neu. Gew. t.* 8. *Link et Otto Ic. Sel. t.* 13. *Maund, Botanist, t.* 96. *Bot. Mag. t.* 2545, 3756, 3769, 4120, 4221, 4361, 4368, 4467, 5295, 5420, 5700, 5869, 5880, 6387. *Bot. Reg. t.* 689 1399, 1453, 1543, 1680, 1824 *et* 1842, *t.* 60. *Illustr. Hortic. t.* 568 *et ser.* 3, *t.* 1, 30, 40, 63. (Icones plurimæ in variis diariis hortulanorum repetitæ.) HOWARDIA, *Klotzsch in Monatsber. Acad. Berl.* 1859, 607.

Icones supra citatæ omnes ad subsectionem typicam pertinent genitalibus 6-meris. Subsectio *Einomeia* species continet ad 10, Mexicano-Texanas v. Cubenses, genitalibus 5-meris. *Jacq. Stirp. Amer. t.* 147. *H. B. et K. Nov. Gen. et Sp. t.* 115. *Seem. Bot. Her. t.* 72. EINOMEIA, *Klotzsch in Monatsber. Acad. Berl.* 1859, 605.

4. *Siphisia*, Duch. Columna stylaris apice 3-loba, lobis integris emarginatis irregulariter crenatis v. rarius 2-fidis, infra lobos exannulata. Antheræ 6, per paria lobos opposita approximatæ. Perianthii tubus sæpissime reduplicatus, limbus varius, sæpe periphericus. Species ad 14, Asiaticæ v. Americanæ hemisphærii borealis. *L'Hér. Stirp. Nov. t.* 7, 7 *b. Wall. Pl. As. Rar. t.* 103. *Bot. Mag. t.* 534, 1369, 3640, 4918, 6067. *Lodd. Bot. Cab. t.* 641. *Illustr. Hortic. t.* 522. SIPHISIA, *Raf. Med. Fl.* i. 62 *ex Duch.* HOCQUARTIA, *Dumort. Comm. Bot.* 30.

Icones supra citatæ ad subsectionem typicam pertinent, columnæ stylaris lobis integerrimis sæpius erectis, capsulis oblongis v. elongatis interdum longissimis, seminibus numerosissimis arcte superpositis. Duchartre sub nomine sectionali *Hexodon*, species 2 distinxit styli lobis 2-fidis scil. *A. sericeam*, Benth., e Guatemala cui tamen lobi columnæ in specimine examinato subintegri apparent; et *A. Kæmpferi*, Willd., e Japonia, Kæmpf. Ic. Jap. t. 49, ubi columnæ lobi potius irregulariter crenato-dentati quam 2-fidi videntur. *A. lineata*, Duch. Rev. Hortic. ser. 4, iii. 280, f. 15, ex icone Japonica descripta, omnino ad *A. Kæmpferi* pertinet; folia sæpe in eadem planta alia late reniformia v. ovato-cordiformia alia angusta hastato-3-loba. Species cæterum *Hexodontis* vix pro subsectione a *Siphisiis* typicis separandæ. Sectio *Asteriolites*, Duch. (ENDODECA, *Raf. ex Klotzsch in Monatsber. Acad. Berl.* 1859, 599), imprimis ad *A. serpentariam*, Linn., Jacq. Hort. Schœnbr. t. 385; Hayne, Arzneigew. ix. t. 21. Torr. Fl. N. York, t. 91, ex America boreali constituta est, cui adjungit Duchartre *A. reticulatam*, Nutt., a Klotzschio in *Siphisia* inclusam pariter ex America boreali. Hæ duæ species, pro subsectione bene distinguuntur columnæ stylaris lobis latis varie emarginatis v. undulato-sublobatis, capsula breviter globosa v. depressa oligosperma, valvis post semina delapsa sæpe stellato-patentibus.

A. longifolia, Champ. e Hong-Kong, a Duchartreo rite ad *Siphisias* typicas refertur, ubi pluribus notis ad *A. Thwaitesii*, Hook. accedit, quæ forte pariter e China provenit.

Præter genera Rafinesquiana supra citata, plurima in Endl. Enchirid. 218 citata nec definita a nemine admissa, hic consulto omittimus.

ORDO CXXXIX. PIPERACEÆ.

Endl. Gen. 265. Lindl. Veg. Kingd. 515. Miq. Syst. Pip. Roterodami, 1843; Illustr. Piper. in Nov. Act. Nat. Cur. xx. Suppl. cum tabb. 92. Cas. DC. Mem. Fam. Pip. in Mem. Soc. Phys. Genev. xviii. cum tabb. 7. SAURUREÆ, Endl. Gen. 266. Lindl. Veg. Kingd. 521.

Flores hermaphroditi v. unisexuales. *Perianthium* (excepta *Lactore*) 0. *Stamina* 2–6 v. rarissime 7–8 (v. 1 ?), hypogyna, filamentis liberis v. rarius basi ovario adnatis. *Antheræ* terminales, erectæ, in filamento sæpe articulatæ, loculis 2 distinctis v. in unum confluentibus longitudinaliter dehiscentibus. *Ovarium* sessile v. rarius in stipitem contractum, e carpellis 3–4 ∞-ovulatis distinctis v. basi coalitis, v. 1-loculare et 1-ovulatum; stigmata nunc 3–4, in ovarii lobos v. carpella discreta, v. ovarium indivisum terminantia, nunc unicum sessile, penicillatum v. indivisum. *Ovulum* unicum erectum, v. plura ascendentia, orthotropa. *Fructus* parvus, in generibus ∞-carpellatis capsularis v. in coccos v. follicula 3 4 secedens, in generibus 1-ovulatis indehiscens, baccatus,

pericarpio succulento v. tenui et fere sicco. *Semen* v. semina globosa, ovoidea v. oblonga, testa membranacea v. tenuiter subcarnosa, rarius coriacea. *Albumen* copiosum, farinaceum, sæpius niveum, extus haud raro induratum. *Embryo* minimus, sacculo amniotico inclusus, in foveola albuminis ad extremitatem ab hilo remotam situs, radicula supera, cotyledonibus brevibus sæpius parum distinctis.

Herbæ, frutices v. rarissime arbores, sæpe aromaticæ v. stimulantes. Systema fibro-vasculare caulis, ex obs. Casim. DC., 'modo (in caulo lignoso *Piperis*) duplex, id est fasciculis periphericis tubum periphericum lignosum formantibus et fasciculis in medulla sparsis sæpe tubum lignosum internum formantibus, semper inter se et cum periphericis quoque nodo anastomosantibus; modo (in caule annuo *Peperomiæ*) simplex, id est nunc tubo peripherico nunc fasciculis sparsis constans.' Folia alterna v. rarius opposita v. 3-4-natim verticillata, rarissime 5-6-na, integerrima v. rarissime 3-fida, 3–∞-nervia v. a basi penninervia, haud raro pellucido-punctata v. succulenta. Stipulæ dum adsint petiolo adnatæ, v. ad basin dilatatam amplexicaulem petioli reductæ, v. postice in unam oppositifoliam connatæ, v. omnino nullæ. Interdum etiam prophyllus ramuli oppositifolii stipulam oppositifoliam simulat. Spicæ, rarius racemi (a nonnullis haud feliciter amenta dictæ) plus minus pedunculatæ, sæpius simplices, terminales v. mox oppositifoliæ, rarius axillares v. plures in pedunculo communi sparsæ, in *Lactore* ad florem 1 v. 2-5 reductæ. Flores parvi, sæpe minuti, secus rhachin sparsi v. sæpius rhachin undique dense obtegentes, interdum annulatim v. spiraliter dense ∞-seriati. Bracteæ subquoque flore sæpe peltatæ, sessiles v. stipitatæ, interdum adnatæ v. concavæ v. rarius lanceolatæ.

Species fere 1000, per orbem utrumque late dispersæ, *Pipereæ* vix extra tropicos extensæ, *Saurureæ* in regionibus temperatis v. subtropicis Americæ et Asiæ orientalis.

Ordo nulli arcte affinis, olim ob structuram caulis junioris, stipularum indole, etc. Monocotyledoneis adscriptus, sed embryo, ex observationibus Kunthii a botanicis recentioribus iterum iterumque repetitis, certe dicotyledoneus. Inter ordines Dicotyledonearum seminum structura *Piperacearum* in solis *Nymphæaceis* observatur, quæ tamen aliis characteribus longe distant. Inter Monochlamydeas Micrembryeas, *Piperaceæ* a *Chloranthaceis* differunt ovario supero, ab omnibus aliis perianthio sæpissime omnino deficiente aliisque notis.

De caulis anatomia confer Miq. Syst. Pip. et Cas. DC. tractatum supra citatos.

FORMÆ ABNORMES.

Perianthium adest calycinum 3-partitum in *Lactore*.

Capsula in coccos indehiscentes v. folliculares secedens in *Saururo* et *Lactore*, 1-locularis apice aperiens in *Houttuynia*.

Albumen potius oleosum quam farinaceum in *Lactore*.

CONSPECTUS GENERUM.

Tribus I. Saurureæ. Ovarii carpella 3-4, 2-8-ovulata.

1. Lactoris. Perianthium 3-partitum. Stamina 6, filamentis anthera multo brevioribus. Ovarii carpella distincta. Frutex ramosissimus parvifolius, pedunculis 1-3-floris.—*Juan Fernandez.*

2. Saururus. Perianthium 0. Stamina 6, 8, v. abortu pauciora, filamentis sub ovario liberis. Ovarii carpella distincta. *Capsula* 3-4-cocca. Herbæ foliis amplis cordatis, racemo floribundo exinvolucrato. *Amer. bor., Asia or.*

3. Houttuynia. Perianthium 0. Stamina 3-6, filamentis basi breviter v. alte ovario adnatis. Ovarium e carpellis connatis 1-loculare. Capsula apice inter stigmata aperiens. Herbæ foliis basi cordatis spica floribunda basi sæpius bracteis 4-6 petaloideis involucrata. —*California, Asia or. temp. et subtrop.*

Tribus II. Pipereæ. Ovarium 1-loculare 1-ovulatum. Fructus indehiscens. Perianthium 0.

4. Zippelia. Flores hermaphroditi, in racemo dissiti. Stamina 6. Ovarium minimum, stylo multo majore crasso carnoso coronatum, stigmatibus 4 distinctis. Fructus siccus, dense glochidiato-muricatus.—*Java.*

5. Piper. Flores hermaphroditi v. unisexuales, dense cylindraceo-spicati v. (in *Ottonia*)

confertim racemosi, v. rarius (in *Maldera*) ♂ secus rhachin dissiti. Stamina 2–6, antherarum loculis distinctis v. rarius (in *Heckeria* paucisque *Chavicis*) in unum confluentibus. Ovarium obtusum v. subrostratum, stigmatibus 3–4 rarius 2 v. 5 coronatum. Bacca nuda. Arbores fruticesve rarius herbæ elatiores.—*Utriusque orbis reg. calid.*

6. VERHUELLIA. Flores hermaphroditi v. polygami, tenuissime spicati. Stamina 2, antherarum loculis globosis connectivo lato separatis. Ovarium stigmatibus 3–4 distinctis coronatum. Herbæ tenerrimæ, repentes.—*Ind. occid.*

7. PEPEROMIA. Flores hermaphroditi v. rarissime abortu unisexuales, tenuissime v. dense spicati. Stamina 2, antherarum loculis in unum 2-valvem confluentibus. Stigma in ovario sessile, terminale v. laterale, penicillatum v. indivisum. Herbæ nunc tenerrimæ repentes, nunc humiles subacaules, v. elatiores tenues v. succulentæ, sæpius annuæ.—*Utriusque orbis reg. calid.*

8 ? SYMBRYON. Flores ♀ (soli noti) tenuiter spicati, spicis 4–5 in pedunculo confertis. Ovarium globosum, inter bracteolas 2 ovatas acuminatas sessile. Stigma terminale, parvum, indivisum. Frutex foliis ovatis coriaceis 3–5-nerviis impunctatis.—*Cuba.*

GENERA EXCLUSA V. DUBIA.

DUGAGELIA, Gaud. in Freyc. Voy. 513, ab auctoribus dubie *Peperomiæ* relata, charactere manco non recognoscenda et nomen deleatur.

LAUREA, Gaud. l. c., est *Bagassa*, Aubl., inter **Urticaceas.**

APONOGETON, Thunb., et OUVIRANDRA, Thou., ab Endlichero in *Saurureis* inclusæ, ad **Alismaceas** pertinent.

TRIBUS I. SAURUREÆ.

1. **Lactoris,** *Philippi in Verh. Zool. Bot. Ver. Wien*, xv. 521, *t.* 13.—Flores hermaphroditi, in pedunculo solitarii v. pauci. Perianthii segmenta 3, calycina, leviter imbricata. Stamina 6, hypogyna, 2-seriata, 3 exteriora segmentis alterna, 3 interiora segmentis opposita, erecta, filamentis brevissimis; antheræ subsessiles, latæ, loculis extrorsum parallelis distinctis rima longitudinali dehiscentibus, connectivo ultra loculos late producto obtuso. Ovarii carpella 3, ima basi subconnata, in stylos breves apice introrsum stigmatosos producta; ovula in quoque carpello 6–8, marginibus intrusis carpellorum affixa. Fructus carpella parum aucta, introrsum folliculatim dehiscentia. Semina in quoque carpello 4–6, ascendentia, oblonga, testa membranacea tenuiter reticulato-striata; albumen copiosum, tenuiter carnosulum; embryo minutus, prope apicem albuminis inclusus, obovoideus, radicula supera.—Frutex diffuse ramosissimus, glaber, ramis more *Piperis* nodosis. Folia alterna, parva, obovata, integerrima, ad axillas sæpe fasciculata; stipulæ membranaceæ, petiolo adnatæ, amplexicaules. Flores ad axillas solitarii v. pauci, in racemulum folio breviorem dispositi, singuli in axilla bracteæ e stipulis connatis compositæ breviter pedicellati.

Species 1, Chilensis.

Genus habitu et sapore *Peperomiarum* nonnullarum, floribus fere *Saururi*, ab omnibus tamen *Piperaceis* differt inflorescentia et perianthio evoluto.

2. **Saururus,** *Linn. Gen. n.* 464. (Mattuschkia, *Gmel. Syst. Nat.* ii. 589, *nomen generi* Anonymo, *Walt. Fl. Car.* 127 *adscriptum*. Spathium, *Lour. Fl. Coch.* 217.)—Flores hermaphroditi, racemosi, intra bracteam pedicellatam sessiles. Perianthium 0. Stamina sub ovario 6 v. 8 v. abortu pauciora, filamentis filiformibus liberis; antheræ erectæ, basifixæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii carpella 3 v. 4, distincta v. basi cohærentia, in stylos erectos v. apice recurvos superne introrsum stigmatosos attenuata; ovula in quoque carpello 2–4, marginibus inflexis carpelli affixa, ascendentia. Fructus subglobosus, e coccis 3–4 arcte contiguis at distinctis extus rugosis clausis v. demum introrsum rima longitudinali v. subfolliculatim dehiscentibus, pericarpio crassiusculo. Semen in quoque cocco sæpius unicum, globosum, erectum, testa pallida membranaceo-carnosula; albumen farinaceum, extus induratum nitidumque; embryo ad normam ordinis.—Herbæ excepto racemo glabræ. Folia alterna, lata, cordata, stipulis membranaceis

petiolo adnatis. Flores parvi, in racemo terminali mox oppositifolio numerosi. Bracteæ ad apicem pedicelli ovatæ, in racemo novello imbricatæ, demum sub staminibus patentes.

Species 2, altera Americæ borealis, altera Asiæ orientalis incola. *Cas. DC. in DC. Prod.* xvi. i. 238. *Jacq. f. Ecl. t.* 18.

Species Asiatica, *S. Loureirii*, Dcne. ab ins. Philippinis usque ad Japoniam extensa, includit *Saururopsin Cumingii*, Cas. DC. l. c. 239. SAURUROPSIS typica, *S. chinensis*, Turcz. in Bull. Soc. Imp. Nat. Mosc. 1848, i. 589, ex Amoy, *Fortune* n. 102, est varietas vix distincta foliis paullo angustioribus. Squamæ hypogynæ sub flore oppositæ ab auctore descriptæ sunt stamina sem. abortiva, quæ hinc inde etsi rarius in speciminibus Fortunianis aliisve observantur.

3. **Houttuynia,** *Thunb. Fl. Jap.* 12, 234, *t.* 26. (Polypara, *Lour. Fl. Coch.* 61. Anemia, *Nutt. in Ann. Nat. Hist. ser.* 1, i. 136. Anemiopsis, *Hook. et Arn. Bot. Beech.* 390, *t.* 92.)—Flores hermaphroditi, spicati, intra bracteam sessilem sessiles. Perianthium 0. Stamina 6 rarius 8 v. abortu pauciora, filamentis filiformibus basi infra medium ovarii v. altius ei adnatis apice liberis; antheræ oblongæ, erectæ, loculis parallelis longitudinaliter dehiscentibus. Ovarium e carpellis 3 v. 4 alte connatis, 1-loculare, placentis totidem parietalibus e marginibus carpellorum plus minus inflexis parum prominulis; styli totidem, liberi, erecti v. subrecurvi, apice introrsum stigmatosi; ovula in quoque placenta ∞ (6–8), 2-seriata, horizontalia v. ascendentia. Fructus subglobosus, 1-locularis, apice inter stylos aperiens. Semina ∞, globosa, testa membranacea; albumen farinaceum, extus vix induratum; embryo ad normam ordinis.—Herbæ perennes, basi radicantes v. surculos reptantes emittentes. Folia alterna, lata v. oblonga, basi sæpius cordata. Stipulæ amplæ, membranaceæ, basi petiolo adnatæ v. in unam connatæ. Spicæ terminales, pedunculatæ, densæ, basi bracteis 4–6 albis petaloideis sæpius involucratæ. Flores sessiles, interdum rhachi crassiore leviter immersi. Bracteæ sub floribus in spica juniore imbricatæ v. jam ante anthesin staminibus breviores vix conspicuæ.

Species 2 v. 3, una Californica, altera Asiatica, per regionem Himalaicam, Chinam et Japoniam late dispersa, tertia Chinensis adhuc dubia. *Cas. DC. in DC. Prod.* xvi. i. 237 *et* 238.

In specie typica Asiatica, *Bot. Mag. t.* 2731, folia fere omnia caulina, cordata; involucrum 4-phyllum v. rarius 5–6-phyllum; bracteæ intra spicam etiam juniorem staminibus breviores parum conspicuæ. In specie Californica, quæ *Anemiopsis*, Hook. et Arn., folia pleraque radicalia, angustiora et basi leviter tantum cordata, caulina primaria ad stipulam amplam reducta, ramulorum tamen dum adsint radicalibus conformia; involucrum sæpius 6-phyllum et bracteæ intra spicam quam in Asiatica majores, juniores imbricatæ. Characteres tamen floris et fructus omnino iidem. *A. Bolanderi*, Cas. DC. in Linnæa xxxvii. 333, nobis ignota est, sed descriptio in omnibus convenit speciei typicæ in California et Mexico late dispersa.

GYMNOTHECA, *Dcne. in Ann. Sc. Nat. ser.* 3, iii. 100, *t.* 5, a nobis non visa est, sed, ex icone et descriptione fusiore, *H. cordatæ*, Thunb. valde affinis est habitu foliis floribusque, differt spica paullo laxiore exinvolucrata, an specimen involucro ætate jam delapso ut interdum observatur in *H. cordata*, an species revera ab initio exinvolucrata haud patet. In utroque casu *Houttuyniæ* congener videtur.

TRIBUS II. PIPEREÆ.

4. **Zippelia,** *Blume in Rœm. et Schult. Syst.* vii. 1614.—Flores hermaphroditi, dissito racemosi. Perianthium 0. Stamina 6, hypogyna, filamentis crassis brevibus; antheræ oblongæ, erectæ, crassiusculæ, loculis introrsum parallelis longitudinaliter dehiscentibus, connectivo ultra loculos crasso obtuso. Ovarium minimum, glanduloso-muricatum; stylus ovario multo major, crasso-carnosus, ovoideus, 4-sulcus, stigmatibus 4 brevibus distinctis coronatus; ovula 2 vidimus, uno solo perfecto a basi erecto, altero minore mox abortiente. Fructus subsiccus, globosus, indehiscens, denso glochidiato-muricatus, stylo haud aucto coronatus. Semen conforme, albumine farinoso; embryo ad normam ordinis. —Herba rhizomate perenni repente. Caulis erectus v. vix ramosus, ad nodos articulatus. Folia alterna, oblique cordata, 5–9-nervia, petiolo in stipulam amplexicaulem dilatato. Racemi graciles, oppositifolii. Flores parvi, intra bracteam concavam obtusam breviter pedicellati, bracteis pisi magnitudinis.

Species 1, Javanica. *Benn. Pl. Jav. Rar.* 76, *t.* 16. *Cas. DC. Prod.* xvi. i. 256, ubi ad sectionem Americanam *Steffensiam* generis *Piperis* refertur; nobis tamen longe diversa videtur inflorescentia, staminum numero et situ, antherarum forma, stylo et fructu. Character noster ex speciminibus Zollingerianis It. 2, n. 2847. In analysi Bennettiana (in Miq. Ill. Pip. t. 92 repetita) fig. 3, ovarium delineatur jam post anthesin aliquantum auctum; per anthesin stylo 3–4-plo minus est.

5. **Piper,** *Linn. Gen. n.* 43, *pro parte.*—Flores hermaphroditi v. unisexuales, dense cylindraceo-spicati v. rarius subracemosi. Perianthium 0. Stamina 2–4, rarius 5–∞, filamentis brevibus v. rarius bracteas excedentibus; antheræ ovatæ v. abbreviatæ, rarius elongatæ, loculis nunc distinctis parallelis dorso appositis, connectivo parum conspicuo v. rarius ultra loculos producto, nunc terminalibus divergentibus v. divaricatis contiguis at distinctis longitudinaliter dehiscentibus, nunc rarius in unum terminalem rima unica bivalvatim dehiscentem confluentibus. Ovarium per anthesin sessile v. vix stipitatum, 1-loculare, obtusum v. stylo conico v. elongato rostratum, stigmatibus 2–5 (sæpius 3–4) distinctis erectis v. recurvis coronatum; ovulum unicum, a basi erectum. Bacca parva, ovoidea v. globosa, interdum 3–4-angulata, lævis, nunc intra bracteas v. rhachi succulenta plus minus immersa, nunc sessilis exserta, nunc rarius breviter v. longe stipitata; pericarpium succulentum v. tenuiter carnosum. Semen conforme, testa sæpius tenui; albumen farinosum, extus sæpe induratum; embryo ad normam ordinis.—Frutices interdum scandentes, rarius arbores v. herbæ elatæ, ramis sæpius ad nodos articulatis. Folia alterna, integerrima v. in una specie 3-fida, basi æqualia v. dimidiata, 3–∞-nervia v. a basi penninervia; stipulæ nunc petiolo adnatæ aliformes, nunc in unam oppositifoliam connatæ v. ad basin petioli parum dilatatam amplexicaulemque reductæ, v. rarius omnino inconspicuæ. Flores cum bracteis subtendentibus peltatis adnatis v. concavis rhachin spicæ dense obtegentes, ad quamque bracteam solitarii, sessiles v. rarius stipitati, rarissime unius sexus secus rhachin dissiti. Spicæ pedunculatæ v. rarius subsessiles, primum terminales, mox oppositifoliæ, rarius (in *Macropipere*) ad axillas solitariæ v. 2–3-næ, v. (in *Heckeria*) in pedunculo axillari umbellatæ.

Species descriptæ ultra 600, per regiones calidiores utriusque orbis latissime dispersæ, in Asia orientali usque ad Japoniam extensæ, in America tropica numerosissimæ, in Africa pauciores, in Europa et America boreali præter Mexicum desunt. *Cas. DC. Prod.* xvi. i. 240, *et in Linnæa* xxxvii. 334 *et* 384. Species tamen plurimæ adhuc imperfecte notæ, in futurum verisimiliter delendæ erint; et numerus forte ad 500 reducendus.

Genus vastum et polymorphum, sed naturale et optime definitum, primum a Kunthio et fere in eodem tempore a Miquelio diligenter scrutatum et in genera plura divisum. Hæc tamen Casimir de Candolle in Prodromo bene in unum iterum conjunxit, et sectiones plures minus feliciter imprimis ad staminum numerum distinxit. Nostro sensu circumscriptiones et characteres a Kunthio v. a Miquelio propositi divisiones magis naturales præbent, etsi non semper accurate definitas. Numerus staminum in pluribus speciebus sat constans, vix tamen cum habitu consentaneus, in aliis variat a 2 ad 5, et uti bene monuit Kunth, interdum etiam in vivo haud facile determinatur, et in sicco difficillime observatur. Etiam stigmatum numerus in nonnullis speciebus variat. Sectiones sequentes a Candolleanis, Kunthianis, Miquelianisve paullo mutatæ distinctiores videntur.

A. *Species gerontogeæ, floribus unisexualibus sæpissime dioicis, v.* (*in speciebus paucis Eupiperis*) *polygamis.*

1. *Muldera.* Flores dioici, ♂ 2–∞-andri, in cyatho (bractea?) carnoso sessili v. stipitato subgloboso v. obliquo vertice aperto inclusi, secus rhachin spicæ dissiti; ♀ secus rhachin sparsi, sessiles v. leviter immersi, bractea adnata margine membranacea parum elevata cincti. Species ad 9, Indiæ orientalis et Archipelagi Malayani incolæ. *Cas. DC. Prod.* xvi. i. 241 (*sect.* Schizonephos). MULDERA, *Miq. Comm. Phyt.* 34 (1840); *Ill. Pip. t.* 59, 60. *Wight, Ic. t.* 1943, 1944. SCHIZONEPHOS, *Griff. Notul.* iv. 383 (1854).

Sectio quoad spicam ♂ a toto genere distinctissima, spica tamen ♀ parum ab illa *Eupiperis* differt. Figuræ dextra et sinistra iconis Wightianæ 1943, in Prodromo ad species diversas relatæ, stirpes ♂ et ♀ unius speciei exhibent, et *Piper Wightii*, Miq., Wight, Ic. t. 1939, Cas. DC. Prod. xvi. i. 365, vix a stirpe ♀ ejusdem speciei differre videtur.

2. *Macropiper.* Spicæ unisexuales, densissimæ, axillares, solitariæ v. in summis axillis 2–3-næ.

Stamina 2–3, antherarum loculis distinctis dorso appositis parallelis v. divergentibus. Stigmata 3. Baccæ sessiles, sæpe cum bracteis rhachibusque succulentis fere in syncarpium connatæ. Species ad 6, insularum maris Pacifici, Australiæ et Novæ Zelandiæ incolæ. *Cas. DC. Prod.* xvi. i. 334 (*Pothomorphe* B). *Seem. Fl. Vit. t.* 75. Macropiper, *Miq. Comm. Phyt.* 35; *Illustr. Pip. t.* 27.

Sectio inflorescentia a toto genere distinctissima, ab *Heckeria* (*Pothomorphe*, Miq.) quacum in Prodromo jungitur, differt insuper spicis unisexualibus, antherarum loculis distinctis et habitu.

3. *Eupiper*. Spicæ sub anthesi densissimæ, oppositifoliæ, omnes unisexuales v. in paucis speciebus androgynæ v. floribus polygamis hermaphroditisque in eadem specie sic dictæ trioicæ. Stamina sæpius 2–3, antherarum loculis dorso appositis distinctis parallelis v. divergentibus v. rarius apice subconfluentibus. Stigmata in ovario obtuso 3, rarius 2 v. 4. Species ultra 100, omnes gerontogeæ. *Cas. DC. Prod.* xvi. i. 339.

Genera sequentia Miqueliana sat naturalia, sed non semper characteribus definitis separata, ad subsectiones *Eupiperis* reducenda videntur:—

a. Cubeba, *Miq. Comm. Phyt.* 33, *t.* 1 *ad* 3 (*Piper*) *et t.* 5; *Illustr. Pip. t.* 46 *ad* 48. Flores stricte dioici. Baccæ nunc breviter nunc longiuscule stipitatæ, etsi ovaria sæpius per anthesin sessilia. *Wall. Pl. As. Rar. t.* 91. *Wight, Ic. t.* 1932 (*Cubeba*).

b. Chavica, *Miq. Syst. Pip.* 222; *Illustr. Pip. t.* 28 *ad* 41, species numerosas includit, spicis omnibus stricte unisexualibus dioicis, floribus nullis hermaphroditis intermixtis. Stigmata in ovario obtuso sessilia. Baccæ sessiles v. subsessiles. *Wight, Ic. t.* 1926 *ad* 1930 (*Chavica*). *Deless. Ic. Sel.* iii. *t.* 89. *Hayne, Arzneig.* xiv. *t.* 20, 21 (*Chavica*).

Chavica, *Cas. DC. Prod.* xvi. i. 388, pro genere proprio admittitur, sed ad species 5 limitatur antherarum loculis ut in *Heckeria* terminalibus demum in unum 2-valvem confluentibus.—*Miq. Illustr. Pip. t.* 42, 43. *Wight, Ic. t.* 1931 (*omnes sub Chavica*).

c. Piper, *Miq. Syst. Pip.* 305; *Illustr. Pip. t.* 49 *ad* 56 limitatur ad species plus minus polygamas floribus nonnullis hermaphroditis in parte inferiore spicarum fœminearum v. interdum spicæ plures (v. etiam omnes?) e floribus hermaphroditis solis. Cætera *Chavicæ*. *Wight, Ic. t.* 1933 *ad* 1938, 1940 *ad* 1942. *Hayne, Arzneig.* xiv. *t.* 6.

Coccobryon, *Klotzsch in Miq. Syst. Pip.* 343; *Illustr. Pip. t.* 61, est species Africana tam tropica quam australis, floribus polygamis *Piperis*, Miq., nec habitu a quibusdam speciebus diversa, sed stigmata constanter 2 tantum. Cas. DC. Prod. xvi. i. 336 e flore hermaphrodito sectionem *Coccobryon* constituit, species 13 continentem nostro sensu in variis sectionibus præcedentibus distribuendas. *P. birmanicum*, Cas. DC., est *P. stylosum*, Miq., Cas. DC. n. 428; ejusdem var. *macrostachyum*, Cas. DC., nobis non differre videtur a *P. muricato*, Bl.; Miq. Illustr. Pip. t. 54, in Prodromo inter *Cubebas* numerato, sed potius ad *Piperum*, Miq. pertinente. *P. cubense*, Cas. DC., rite a Grisebachio ad *Enckeam* relatum fuit. *P. piluliferum*, H. B. et K., *P. quitense*, Cas. DC., et *P. cyrtopodon*, Cas. DC., ad sectionem *Peltobryon* referrimus; *P. San Carlosianum*, *P. imperiale*, aliasque nonnullas ad *Steffensiæ* subsectionem *Artanthem*.

4. *Rhyncholepis*. Spicæ densissimæ, breves. Flores dioici v. polygami et stamina 2–3 *Eupiperis*. Ovarium in stylum conicum v. longiusculum apice 3–4-stigmatiferum attenuatum. Bacca sessilis, apice rostrata. Species 3 v. 4, Asiaticæ *Eupiper* cum *Peltobryo* arcte connectentes. Huc pertinent *P. rhyncholepis*, Cas. DC. (Rhyncholepis, *Miq. Syst. Pip.* 282; *Ill. Pip. t.* 45), species 2 rite in unam a Cas. DC. junctæ dioicam, bracteis in stirpe ♂ longe acuminatis antheris minimis loculis apice confluentibus, *P. stylosum*, Miq.; Cas. DC. n. 428 (*P. birmanicum* Cas. DC. n. 400, excl. var. *β*) antherarum loculis perfecte distinctis, *P. penangense*, Cas. DC. n. 464, Miq. Illustr. Pip. t. 44 (*Chavica*), et forte species quarta e specimine imperfecto non rite determinata.

B. *Species Americanæ* (*una etiam per orbem veterem extensa*), *floribus hermaphroditis v. rarissime abortu dioicis*.

5. *Peltobryon*. Spicæ oppositifoliæ, densissimæ, globosæ oblongæ v. rarius elongatæ. Flores hermaphroditi. Stamina 3–5, rarius 2. Ovarium in stylum conicum v. longiusculum apice 2–4-stigmatiferum attenuatum. Bacca sessilis, apice rostrata. Species ad 16, Austro-Americanæ, *Cas. DC. Prod.* xvi. i. 258 (*Steffensia* § 3 A). *Ruiz et Pav. Fl. Per. et Chil. t.* 53*a*, 60*b*, 61*a*. Peltobryon, *Klotzsch*; *Miq. Syst. Pip.* 369; *Illustr. Pip. t.* 67, *et in Mart. Fl. Bras.* iv. i. *t.* 4, 5, staminibus sæpius 4, stigmatibus sæpius 3. Hic etiam includendæ videntur Callianira, *Miq. Syst. Pip.* 344; *Illustr. Pip. t.* 62, species Mexicana (*P. melastomoides*, Cham.; Cas. DC. n. 19) staminibus sæpius 5, stigmatibus 3 et Sphærostachys, *Miq. Syst. Pip.* 375; *Illustr. Pip. t.* 68, species Andina (*P. piluliferum* H. B. et K.; Cas. DC. n. 404) staminibus ex Miq. 3–4, ex Cas. DC. 2, stigmatibus 2, spicis parvis subglobosis. Sectio *Rhyncholepidi* valde affinis.

6. *Steffensia.* Spicæ oppositifoliæ, densæ, cylindraceæ, sæpe elongatæ, rarissime breves. Flores hermaphroditi, sessiles v. (in *Ottonia*) pedicellati. Stamina 4–6 v. rarius 2–3. Ovarium obtusum, stigmatibus 3–4, rarius 5 v. 2. Species bene notæ ultra 350, omnes Americanæ, *Cas. DC. Prod.* xvi. i. 243 *ad* 330 (sect. *Enckea, Steffensia* et *Carpunya* excl. speciebus paucis). Subsectiones sequentes, quoad species plerasque facillime distinguuntur, interdum vero species ambiguæ v. variabiles genera v. sectiones bene limitare prohibent.

a. Ottonia. Flores in spica tenui ut in *Enckea* sparsi, sed omnes intra bracteam pedicellati, spica in racemum transformata. Stamina et stigmata sæpius 4. Species ad 20. *Cas. DC. Prod.* xvi. i. 252 (*Steffensiæ* § 2*a*). *Vahl, Ecl.* i. *t.* 1. *Vell. Fl. Flum. Ic.* i. *t.* 55. Ottonia, *Spreng. Neu. Entd.* i. 255; *Miq. Syst. Pip.* 536 (*Ottoniæ genuinæ*), *et in Mart. Fl. Bras.* iv. i. *t.* 22, 23; *Illustr. Pip. t.* 92. Serronia, *Gaudich. in Deless. Ic.* iii. 54, *t.* 90. *Moric. Pl. Nouv. Amer. t.* 57.

b. Enckea. Flores in spica sæpius tenui densaque sparsi, sessiles, sed bracteis parum conspicuis non annulati nec distincte regulariterque spirales. Stamina vulgo 5–6. Stigmata 3. Baccæ sæpius exsertæ sed sessiles, apice obtusæ. Species ultra 20, *Cas. DC. Prod.* xvi. i. 243 (excl. n. 19 ad *Peltobryon* et n. 20 ad *Artanthem* referendis). *Jacq. Ic. Rar. t.* 8. *Jacq. f. Ecl. t.* 76. *Vell. Fl. Flum. Ic.* i. *t.* 61. Enckea, *Kunth in Linnæa* xiii. 590. *Miq. Syst. Pip.* 346; *Illustr. Pip. t.* 63 *ad* 66; *et in Mart. Fl. Bras.* iv. i. *t.* 3.

P. marginatum, Jacq. in Prodromo sub *Enckea* (n. 20) inclusum, nobis potius ad *Artanthem* pertinere videtur.

Carpunya, *Presl, Epimel. Bot.* 228, species plures continet ab *Ottonia* distinctas floribus sessilibus, ab *Enckea*, cui inflorescentia accedunt, staminibus vulgo 4. A Kunthio et Miquelio in *Ottonia* includuntur. Species typicæ sunt *P. Carpunya*, Ruiz et Pav. Fl. Per. t. 63*b*; Cas. DC. n. 371, et *Ottonia Lessertiana*, Miq., Illustr. Pip. t. 92 (*P. Lessertianum*, Cas. DC. n. 67) quæ ex speciminibus nostris ad unam speciem pertinent inter affines foliis lævibus nitidulis aliisque notis facile distinctam. A Miquelio, Preslio et Cas. DC. tamen separantur sed characteribus diversis. Stamina ex Cas. DC. in *P. Lessertiano* 4, in *P. Carpunya* 3, ex Miq. et Presl in utroque 4. Stigmata ex Miq. 4–5 in *P. Lessertiano*, 3 in *P. Carpunya*, sed bacca ex Cas. DC. in utroque subgloboso-3-gona, ex Preslio 4-gona. Cæterum Cas. DC. in sectione sua *Carpunya*, Prod. xvi. i. 326, species plures admittit quæ nobis inter *Peltobryon*, *Enckeam* et *Artanthem* distribuendæ videntur.

c. Artanthe. Flores in spica densa sæpe elongata nunc longissima densi, cum bracteis in series regulariter annulares v. distincte spirales dispositi. Stamina sæpius 4, interdum 3, rarius 2 v. 5. Ovarium sessile, obtusum, stigmatibus 3 v. 4 rarius 2 v. 5. Baccæ sæpius bracteas parum excedentes, interdum rhachi bracteisque succulentis subinclusæ. Species ad 300. *Cas. DC. Prod.* xvi. i. 251 (sect. *Steffensia*, excl. § 2 et § 3 A, paucisque aliis). *Ruiz et Pav. Fl. Per. et Chil. t.* 53 *ad* 64 (*excl. t.* 53*a*, 59*a*, 60*b*, 61*a* et 63*b*). *Vahl, Ecl. t.* 2, 3, 11. *Jacq. Ic. Rar. t.* 210, 211, 215. *Jacq. f. Ecl. t.* 84, 93, 94. *Rudge, Pl. Gui. t.* 6, 7, 13, 14. *Vell. Fl. Flum. Ic.* i. *t.* 56 *ad* 60. *Opiz in Rel. Hænk. t.* 26 *ad* 28, 29, *f.* 1. *Bertol. Fl. Guatemal. t.* 1. Steffensia et Schilleria, *Kunth in Linnæa*, xiii. 609 *ad* 726. Artanthe, *Miq. Comm. Phyt.* 40, *t.* 7, 8; *Syst. Pip.* 377; *Illustr. Pip. t.* 69 *ad* 91; *et in Mart. Fl. Bras.* iv. i. *t.* 6 *ad* 21 *et t.* 24 (*Ottonia*). *Benth. Bot. Sulph. t.* 54. *Seem. Bot. Her. t.* 38 *ad* 42.

7. *Nematanthera.* Spicæ oppositifoliæ, parvæ, densæ. Flores hermaphroditi (v. unisexuales?), sessiles. Stamina 2 (*Miq.*) v. 1 (*Cas. DC.*); anthera linearis, filamento ovarioque 2–3-plo longior, loculis lateralibus, connectivo obtuse clavato coronata. Ovarium obtusum, stigmatibus 2–3. Species 2, Guianenses. *Cas. DC. Prod.* xvi. i. 367. Nematanthera, *Miq. in Linnæa* xviii. 606, *t.* 11. Antheræ in ordine anomalæ, iis *Ascarinæ* v. *Hedyosmi* accedentes.

8. *Heckeria.* Spicæ densissimæ, elongatæ, in pedunculo axillari plures subumbellatæ. Flores hermaphroditi, sessiles. Stamina 2–3; antheræ parvæ, loculis confluentibus 2-valves. Ovarium obtusum, stigmatibus 3. Folia ampla, interdum peltata. Species ad 8, omnes Americanæ, una tamen etiam in orbe vetere inter tropicos late dispersa. *Cas. DC. Prod.* xvi. i. 331 (sect. *Pothomorphe*, errore *Potomorphe*, A.). *Jacq. Ic. Rar. t.* 216. *Ruiz et Pav. Fl. Per. et Chil. t.* 59*a*. *Vell. Fl. Flum. Ic.* i. *t.* 54. *Link et Otto, Ic. Pl. Sel. t.* 6. *Saund. Ref. Bot. t.* 230. Heckeria, *Kunth in Linnæa* xiii. 564 (1839 etsi forte initio 1840 edita). Pothomorphe, *Miq. Comm. Phyt.* 36 (Dec. 1840 forte initio 1841 edita); *Illustr. Pip. t.* 25, 26. *Wight, Ic. t.* 1925. In *P. Ottonis*, Miq. Illustr. Pip. t. 25, antheræ 2-loculares delineatæ sunt, sed in specimine Seemanniano a Miquelio determinato certe confluentim 1-loculares sunt, ut jam observavit Kunth in cæteris speciebus.

6. **Verhuellia,** *Miq. Syst. Pip.* 47. (Mildea, *Griseb. Cat. Pl. Cub.* 63.)—Flores her-

maphroditi v. polygami, tenuissime et interrupte spicati. Perianthium 0. **Stamina 2**, filamentis brevissimis; antherarum loculi distincti, divergentes, connectivo latiusculo separati. Ovarium inter stamina sessile, ovoideum, stigmatibus 3–4 coronatum; **ovulum** unicum, a basi erectum. Bacca minuta, globosa, fere exsucca, pericarpio tenui. **Semen** conforme, testa membranacea; albumen farinosum; embryo ad normam ordinis.—**Herbæ** tenerrimæ, diffusæ v. prostratæ repentesque, ad nodos radicantes, ramis filiformibus. **Folia** alterna v. ad nodos fasciculata, petiolata, rotundata v. reniformia, tenuia. **Spicæ** filiformes, ad nodos inter folia pedunculatæ. **Flores** minutissimi, secus rhachin dissiti v. superiores ♂ magis approximati, intra bracteam sessilem peltatam sessiles v. breviter pedicellati.

Species 2, Indiæ occidentalis incolæ. *Cas. DC. Prod.* xvi. i. 391. *Miq. Ill. Pip. t.* 1, *f. a* quoad analysin imperfecta, a *Cas. DC. in Mem. Pip. t.* 1, correcta, ubi tamen stigmata longiora depicta quam in speciminibus nostris. *Schmitz in Flora*, 1872, 401, *t.* 7, 8.

Genus habitu plerisque notis *Peperomiis* (*Acrocarpidiis*) nonnullis simillimum, sed antheris stigmatibusque distinctum. *V. brasiliensis*, Miq. Ill. Pip. t. 1, f. b, a Cas. DC. rite ad *Peperomiam* refertur. *V. Knoblecheriana*, Cas. DC., nobis pariter ad *Peperomiam* revocanda videtur. Est *P. Knoblecheriana*, Schott in Bot. Zeit. 1851, 225, t. 5, planta in horto Schœnbrunnensi in humo ex Africa centrali recepta enata et ex icone tam habitu quam patria a *Verhuellia* recedit et *Peperomiæ pellucidæ* approximatur. Character Prodromi verisimiliter ad iconem instructus ubi stigmata 4 distincta apparent. In descriptione tamen Schottii antheræ globosæ nec bigloboseæ, et stigma unicum penicillatum, dicuntur.

7. **Peperomia**, *Ruiz et Pav. Fl. Per. et Chil.* i. 29, *t.* 44 *ad* 52.—Flores hermaphroditi, dense v. dissite sæpiusque tenuiter spicati. Perianthium 0. Stamina 2, filamentis brevibus v. rarius bracteas excedentibus; antheræ transversim oblongæ v. subglobosæ, loculis in unum 2-valvem confluentibus. Ovarium sessile v. basi contractum substipitatum, apice obtusum acutum v. rostratum; stigma indivisum, sæpe penicillatum, terminale v. infra rostrum ovarii laterale; ovulum unicum, a basi erectum. Bacca parva sæpe minuta, fere exsucca, pericarpio tenui. Semen conforme, testa membranacea v. coriacea; albumen farinosum; embryo ad normam ordinis.—Herbæ annuæ v. caudice repente v. tuberoso basi perennantes, caulibus prostratis repentibus filiformibusque v. erectis tenuibus v. succulentis. Folia alterna opposita v. 3–4-natim verticillata rarius 5 6-na, integerrima, carnosula succulenta v. tenuiter membranacea, sæpius pellucido-punctata; stipulæ 0. Flores minuti, nunc spicæ rhachin undique dense obtegentes, seriebus annularibus v. spiralibus conferti v. sparsi, sessiles v. foveolis rhacheos leviter immersi, nunc secus rhachin filiformem dissite sparsi. Spicæ in pedunculo terminali v. mox oppositifolio solitariæ geminæ v. plures subumbellati, v. secus rhachin communem sparsæ, pedunculo polystachyo rarissime axillari. Bracteæ sub quoque flore sessiles, interdum peltatim affixæ.

Species descriptæ (nonnullæ ulterius reducendæ) fere 400, per regiones calidiores utriusque orbis late dispersæ, ex maxima tamen parte Americanæ, ubi a Chile et republica Argentina usque ad Mexicum et Floridam extensæ. *Cas. DC. Prod.* xvi. i. 392, *et in Linnæa* xxxvii. 365 *et* 387. *Henschen, Etudes Peperom. in Nov. Act. Reg. Soc. Sc. Upsal. ser.* 3, viii. *cum tabb.* 7. *Miq. Illustr. Pip. t.* 2 *ad* 23, *in Mart. Fl. Bras.* iv. i. *t.* 1, 2, *et in Linnæa* xx. *t.* 1. *H. B. et K. Nov. Gen. et Sp.* i. *t.* 3 *ad* 17. *Opiz in Rel. Haenk. t.* 29. *f.* 2, *t.* 30. *J. V. Thomps. in Trans. Linn. Soc.* ix. *t.* 21. *Seem. Bot. Her. t.* 37. *Wawra, Pr. Maxim. Reise, Bot. t.* 19, 20, 82, 83. *Schott in Bot. Zeit.* 1851, 225, *t.* 5. *Wight, Ic. t.* 1921 *ad* 1924. *Hook. Ic. Pl. t.* 91, 327, 332; *Exot. Fl. t.* 21 *ad* 23, 58, 66, 67, 92. 164, 165. *Bot. Mag. t.* 5568, 5634. *Link et Otto, Ic. Sel. t.* 7. *Regel in Bull. Soc. Imp. Nat. Mosc.* 1858, *t.* 3, *et Gartenfl. t.* 265, 271. *Saund. Ref. Bot. t.* 12, 13, 40, 41, 211, 302. PIPERIS sp. *Linn. Hort. Cliff. t.* 4. *Jacq. Ic. Rar. t.* 9, 212 *ad* 214, 217 *ad* 219. *Rudge, Pl. Gui. t.* 5. *Vell. Fl. Flum. Ic.* i *t.* 62 *ad* 65. In pluribus iconibus hic citatis antheræ errore 2-loculares delineatæ sunt, antherarum effœtarum valvis patentissimis incaute pro loculis distinctis sumptis.

Genus bene limitatum et habitu sat varium, sed difficillime in sectiones distinctas dividitur. Species in Prodromo in series artificiales distribuuntur, characteribus tamen in pluribus ambiguis. Henschen in Mem. cit. in Nov. Act. Acad. Ups. ser. 3, viii. sectiones 2 accepit: *Acrocarpidium*,

floribus in rhachi filiformi spicæ sessilibus, baccis maturis basi contractis sessilibus, et *Eupeperomia* floribus in foveolis rhacheos carnosæ spicæ plus minus immersis, baccis pedicello demum brevissime carnoso impositis et subsectiones 2 agnovit: *Micropiper* stigmate terminali et *Rhynchophorum* stigmate infra apicem styli v. ovarii rostri laterali. Species tamen intermediæ sæpe occurrunt. Miquel genera distincta sequentia proposuit, sat naturalia sed male definita:—

ACROCARPIDIUM, *Miq. Syst. Pip.* 51. Herbæ Americanæ, teneræ, radicantes, caulibus filiformibus in arborum truncos sæpe longe reptantibus. Baccæ breviter stipitatæ, apice angustæ.

PHYLLOBRYON, *Miq. Syst. Pip.* 50; *Illustr. Pip. t.* 2, est *Peperomia foliiflora*, Ruiz et Pav. Fl. Per. et Chil. t. 45, charactere fere *Acrocarpidii*, sed habitu et inflorescentia peculiari. Ramuli floriferi fasciculati folium unicum sub fasciculo spicarum ferentes folia simulant longe petiolata spicas ad basin limbi ferentia.

ERASMIA, *Miq. Syst. Pip.* 199; *Illustr. Pip. t.* 24, est species Mexicana ab *Acrocarpidio* distincta habitu et stigmate elongato-conico. Formam typicam delineatam spicis pluribus secus pedunculum longum sparsis non vidimus, sed specimen in herb. Kew a Miquelio inscriptum 'forma minor pauciflora' et a Cas. DC. in Prodromo sub *P. Erasmia* n. 22 descriptum, spicis in pedunculo geminis, est specimen typicum *P. lancifoliæ*, Hook. Ic. Pl. t. 332, Cas. DC. Prod. n. 172.

TILDENIA, *Miq. in Diar. Instit. Reg. Nederl.* 1842, *ex ejusd. Syst. Pip.* 69, species Americanæ acaules v. subacaules foliis plerisque radicalibus, et MICROPIPER, *Miq. Comm. Phyt.* 39, *t.* 5, 6, 8, 9, species utriusque orbis stigmate terminali, ab auctore ipso Syst. Pip. ad sectiones *Peperomiæ* reducuntur.

P. Galeottiana, Hook. Ic. Pl. t. 327; Cas. DC. Prod. n. 11, est *P. Mexicana*, Miq., Cas. DC. Prod. n. 7. *P. brevipes*, Cas. DC. Prod. n. 20, eadem videtur ac *P. guayaquilensis*, Cas. DC. n. 37. *P. diffusam*, Cas. DC. n. 14, a speciminibus nonnullis *P. galioidis*, H. B. et K., Cas. DC. n. 362 distinguere nequimus. *P. subpeltata*, Cas. DC. n. 94, eadem videtur ac *P. Jamesoniana*, Cas. DC. n. 103. *P. nummularifolia*, H. B. et K., Cas. DC. n. 141, foliis plerisque alternis, non specifice distincta videtur a *P. circinata*, Link, Cas. DC. n. 266, foliis plerisque oppositis, nam species aliæ oppositifoliæ variare videntur foliis hinc inde alternis, uti species nonnullæ foliis sæpius ternatim verticillatis variant foliis oppositis. Oppositio foliorum est in ordine abnormis nec ut in *Chloranthaceis* normalis.

8? **Symbryon,** *Griseb. Cat. Pl. Cub.* 64.—Flores unisexuales (an polygami?), ♀ soli noti, tenuiter spicati. Ovarium minimum, sessile, globosum, stigmate minuto indiviso coronatum; ovulum unicum a basi erectum.—Frutex glaber. Folia alterna, petiolata, ovata, acuminata, 3–5-nervia, transversim venulosa, subcoriacea, impunctata. Stipulæ 0. Spicæ ♀ 4–5, ad apicem pedunculi terminalis v. oppositifolii subdigitatim conferti. Flores secus rhachin puberulum sparsi, bractea parva lanceolata obtecti et bracteolis 2 oppositis e basi lata subulato-acuminatis vix bractea brevioribus stipati.

Species 1, Cubensis. *Cas. DC. Prod.* xvi. i. 471.

Genus *Peperomiæ* affine videtur, etsi folia firma et impunctata et bracteolæ evolutæ (ob formam vix pro staminodiis habendæ) cæterum in ordine ignotæ. Flores in speciminibus adhuc juniores.

ORDO CXL. CHLORANTHACEÆ.

Endl. Gen. 264. Lindl. Veg. Kingd. 519.

Flores unisexuales v. masculo cum fœmineo basi cohærentibus pseudohermaphroditi. Fl. ♂: *Perianthium* 0. *Stamina* 1 v. 3, in massam 3-lobam connati; filamenta brevissima, cum connectivo continua. *Antheræ* 2-loculares, loculis adnatis parallelis v. divergentibus longitudinaliter dehiscentibus, v. staminum lateralium 1-loculares. Fl. ♀: *Perianthium* ovario adnatum apice minute 3-dentatum, v. margine nullo prominente inconspicuum. *Ovarium* inferum v. nudum, 1-loculare; stigma sessile, v. rarius stylo brevi fultum, truncatum subclavatum v. breviter lineare, indivisum. *Ovulum* unicum, orthotropum,

ab apice pendulum. *Drupa* parva, ovoidea v. globosa, exocarpio carnoso v. succulento, endocarpio crustaceo v. indurato. *Semen* conforme, pendulum, testa membranacea. *Albumen* copiosum, carnosum. *Embryo* ab hilo remotus, minutus, albumine inclusus, cotyledonibus divaricatis v. vix distinctis, radicula infera.

Herbæ, frutices v. arbores, sæpius aromatici. Folia opposita, plerumque denticulata, penninervia, petiolis basi linea transversa connexis v. in vaginam plus minus elongatam connatis. Stipulæ parvæ subulatæ ad margines vaginæ v. basin petiolorum. Inflorescentiæ terminales v. ramulis floriferis abbreviatis paucifoliatis v. aphyllis pseudoaxillares. Flores spicati v. fœminei varie paniculati v. capitati. Bracteæ variæ.

Species ad 25, per Americam tropicam, Asiam tropicam et orientalem et insulas maris Pacifici usque ad Novam Zelandiam dispersæ. *Solms-Laub. in DC. Prod.* xvi. i. 472.

Ordo a botanicis plurimis *Piperaceis* approximatus et iis adjunctus a Cordemoyo in Adansonia iii. 293, quem secutus est Baillon, Hist. Pl. iii. 494, ab illis tamen notis pluribus essentialibus distat, præsertim foliis stricte oppositis, staminum indole, pistillo monocarpico, ovario infero, embryone in albumine carnoso incluso, etc. Characteribus nonnullis *Monimiaceis* accedit, sed ab omnibus limitibus certis longe separatur.

CONSPECTUS GENERUM.

1. CHLORANTHUS. Flores pseudohermaphroditi, spicati, ♂ 1–3-andro, basi ovario nudo lateraliter adnato.—*Asia trop. et or.*

2. ASCARINA. Flores unisexuales, spicati. Stamen 1. Ovarium nudum.—*Ins. Pacif., N. Zelandia.*

3. HEDYOSMUM. Flores unisexuales, ♂ spicati, ♀ varie paniculati v. capitati. Stamen 1. Ovarium (perianthii adnati limbo coronatum) apice 3-dentatum.—*Amer. trop.*

1. **Chloranthus**, *Swartz in Philos. Trans.* lxxvii. 359, *ed. abr.* xvi. 302. (Creodus, *Lour. Fl. Coch.* 88. Cryphæa, *Hamilt. in Brewst. Edinb. Journ. Sc.* ii. 11. Peperidia, *Reichb. Consp. Gen.* 212a. Nigrina, *Thunb. Nov. Gen.* 58 (*char. falso*) *ex ic. in Nov. Act. Soc. Sc. Upsal.* vii. *t.* 5.)—Flores pseudohermaphroditi, masculo cum fœmineo basi lateraliter connatis, spicati. Perianthium 0. Stamina 3, anthera centrali 2-loculari, lateralibus 1-locularibus in massam 3-lobam connatis, v. 1, lateralibus deficientibus. Ovarium nudum; stigma subsessile, truncatum.—Frutices v. herbæ perennes, caule ad nodos articulato. Folia opposita, linea transversa connexa, vix vaginantia, interdum paribus 2 arcte approximatis subverticillata. Spicæ terminales, tenues, simplices v. ramosæ.

Species ad 8, Asiæ tropicæ et orientalis a Bengala usque ad Japoniam et ins. Philippinarum incolæ. *Solms-Laub. in DC. Prod.* xvi. i. 474.

Genus facile in sectiones 3 dividitur:—

1. *Euchloranthus.* Andrœcium 3-lobum, lobo medio antheram 2-locularem lateralibus antheras 1-loculares ferentibus, connectivis crassis apice parum productis obtusis. *L'Hér. Sert. Angl. t.* 2. *Lindl. Collect. Bot. t.* 17. *Blume, Fl. Jav. Chlor. t.* 1. *Wight, Ic. t.* 1945. *Bot. Mag. t.* 2190.

2. *Tricercandra.* Andrœcium 2-lobum, lobo medio antheram 2-locularem lateralibus antheras 1-loculares ferentibus, connectivis ultra loculos in appendicem longe linearem productis. TRICERCANDRA, *A. Gray in Perry, Jap. Exped.* ii. 318, *et Mem. Amer. Acad.* vi. 405. SAINTLEGERIA, *Cordem. in Baill. Adans.* iii. 300. *Rupr. Dec. Pl. Amur. t.* 2.

3. *Sarcandra.* Andrœcium indivisum, anthera unica 2-loculari. *Blume, Fl. Jav. Chlor. t.* 2. SARCANDRA, *Gardn. in Calc. Journ. Nat. Hist.* vi. 348. *Wight, Ic. t.* 1946.

2. **Ascarina**, *Forst. Char. Gen.* 117, *t.* 59.—Flores dioici (v. rarius monoici ?) utriusque sexus spicati. Perianthium 0. Anthera unica, subsessilis, linearis, cylindracea, loculis parallelis longitudinaliter dehiscentibus, connectivo angusto obtuso vix ultra loculos producto. Ovarium nudum; stigma subsessile, truncatum.—Frutices v. arbusculæ aromaticæ, ramulis ad nodos articulatis. Folia opposita, obtuse serrata, penninervia, petiolis basi in vaginam brevissimam amplexicaulem connatis, stipulis minimis. Spicæ axillares v. terminales, simplices v. basi ramosæ v. fasciculatæ.

Species 3 v. 4, inter se valde affines, insularum maris Pacifici a Taiti usque ad Novam Caledoniam et Novam Zelandiam incolæ. *Solms-Laub. in DC. Prod.* xvi. i. 478. *Seem. Fl. Vit. t.* 74.

Species Novo-Zelandica, *A. lucida*, Hook. f. Fl. N. Zel. i. 228, in Prodromo perperam nomine novo *A. rubricaulis* designatur; sed forte stirps Novo-Caledonica sub hoc nomine inclusa specifice distincta erit. Powell formas 2 distinctas *A. lanceolatæ*, Hook. f., in ins. Samoa invenit, alteram valde aromaticam, alteram inodoram in montibus elatioribus crescentem.

3. **Hedyosmum**, *Swartz, Prod. Fl. Ind. Occid.* 84; *Fl. Ind. Occid.* 957, *t.* 18. (Tafalla, *Ruiz et Pav. Prod. Fl. Per. et Chil.* 136, *t.* 29; *Syst. Veg.* 269.)—Flores monoici v. dioici, inflorescentiis unisexualibus. Fl. ♂ spicati, ebracteati. Anthera unica, subsessilis, linearis v. oblonga, connectivo ultra loculos breviter appendiculato v. subpeltato, loculis parallelis longitudinaliter dehiscentibus. Fl. ♀ varie capitulati v. dissiti. Perianthii tubus ovario adnatus; limbus brevissimus, 3-dentatus. Stylus brevissimus, apice stigmatosus, v. stigma sessile, obtusum, rarius lineare v. clavatum. Drupa parva, globosa v. ovoidea, interdum 3-quetra v. 3-costata, exocarpio succulento haud crasso, endocarpio sæpius duro. Semen ordinis.—Arbores v. frutices elatiores, aromaticæ, ramis ad nodos sæpe articulatis. Folia opposita, plerumque serrata, petiolis basi connatis in vaginam brevem v. longiusculam, stipulis ad marginem vaginæ parvis. Inflorescentiæ axillares v. in axillis ultimis pseudoterminales, in speciebus diversis variæ.

Species enumeratæ 23 sed verisimiliter ad 16 reducendæ, Americæ tropicæ incolæ. *Solms-Laub. in DC. Prod.* xvi. i. 479, ubi in sectiones 3 distribuuntur, sed formas 4 quoad inflorescentiam distinctas agnovimus. 1. In specie typica, *H. nutante*, Sw., flores monoici, spicæ ♂ in pedunculo longo tenui aphyllo nutantes; antheræ connectivum ultra loculos in appendicem erectam loculis æquilongam productum, flores ♀ secus ramos paniculæ cymosæ dissiti. 2. In *H. Grisebachii*, Solms, e Cuba, flores ut in omnibus sequentibus dioici; spicæ ♂ in panicula plures sessiles; antheræ connectivum supra loculos latiusculum obtusum in loculos recurvum, flores ♀ ut in *H. nutante* secus ramos paniculæ cymosæ dissiti v. rarius hinc inde glomerati. Hæc species tamen referenda videtur (ex ic. et descr.) ad *H. Bonplandianum*, Kunth, H. B. et K. Nov. Gen. et Sp. t. 634, 635, cujus statio Kunthio ignota erat, sed verisimiliter ad plantas Cubenses ab Humb. Bonpl. in Cuba lectas pertinet. 3. In *H. arborescente*, Sw., affinibusque pluribus ex America australi, flores dioici; spicæ ♂ in panicula plures sessiles v. breviter pedicellati; antheræ connectivum obtusum ultra loculos vix productum v. iis subbrevius, verticem peltatum antheræ formans; flores ♀ per 3–5 glomerati bracteis subinclusi glomerulis paniculatis. 4. In *H. scabro*, Solms, cui *H. Mandoni*, Solms, referendum videtur, in *H. parvifolio*, Cordem., a quo *H. cumbalense*, Karst. Fl. Columb. ii. *t.* 168 vix differt, paucisque aliis flores dioici; spicæ utriusque sexus in axillis summis ramulorum solitariæ sessiles, ramulo florifero interdum axillari ad pedunculum apice 2-foliatum reducto, spicæ ♂ demum sæpius valde elongatæ floribundæ, ♀ globosæ v. ovoideæ floribus sub bracteis carnosulis fere occultæ, fructiferæ fere in syncarpium connatæ; ab his sectio *Artocarpoides*, Solms, non differt nisi capitulis syncarpiisve ♀ adhuc majoribus floribus numerosioribus, stigmate lineari.

ORDO CXLI. MYRISTICEÆ.

Endl. Gen. 829. Lindl. Veg. Kingd. 301. Baill. Hist. Pl. ii. 498.

Flores dioici, regulares. *Perianthium* inferum, deciduum, 3-lobum v. rarius 2- v. 4-lobum, lobis æstivatione valvatis. Fl. ♂: *Staminum* filamenta in columnam centralem elongatam v. brevissimam nunc fere obsoletam connata. *Antheræ* 3–∞ (usque ad 18), columnæ in annulum parallele adnatæ, v. ad apicem columnæ brevissimæ erectæ liberæque v. in massam globosam connatæ, 2-loculares, loculis rima longitudinali dehiscentibus. *Ovarii* rudimentum 0. Fl. ♀: *Staminodia* 0. *Ovarium* in fundo perianthii sessile, liberum, 1-loculare. *Stigma* sessile v. subsessile, capitatum v. depressum. *Ovulum* unicum, e basi loculi erectum, anatropum. *Fructus* carnosus, in valvas 2 rarius 4 tarde dehiscens. *Semen* erectum, arillo carnoso v. tenui sæpius colorato integro lobato v. lacero involutum; testa carnosa v. tenuis, intus sæpe indurata. *Albumen* durum, copiose

plicato-ruminatum. *Embryo* prope hilum minimus, cotyledonibus divaricatis, radicula brevi infera.

Arbores sæpe aromaticæ. Folia alterna, integerrima, pennivenia, sæpe pellucido-punctata. Stipulæ 0. Flores parvi nunc minimi, masculi sæpius fasciculati v. subumbellati, fasciculis umbellisve bractea caduca stipatis plus minus paniculatis; bracteolæ sub pedicellis minutæ v. 0. Flores fœminei sæpius pauciores, interdum solitarii. Inflorescentiæ axillares v. supra-axillares.

Species ad 80, pleræque Asiæ et Americæ tropicæ incolæ, perpaucæ Africanæ, una Madagascariensis, una Australiensis. *Alph. DC. Prod.* xiv. 189, *et in Mart. Fl. Bras.* v. i. 107, *t.* 38 *ad* 44. *Gærtn. Fruct. t.* 41. *Lam. in Mem. Acad. Sc. Par.* 1788, 148, *t.* 5 *ad* 9.

Genus unicum, nulli arcte affine. A nonnullis botanicis *Anonaceis* approximatur, ab aliis *Monimiaceis*, ab utroque ordine characteribus gravioribus, imprimis staminum indole et situ et pistilli structura recedit. Ovarium versimiliter circa ovulum unicum bicarpellatum est.

GENUS EXCLUSUM.

HYALOSTEMMA, Wall in Lindl. Veg. Kingd. 302, sub *Myristiceis* recensitum, est *Miliusa* inter *Anonaceas*.

1. **Myristica**, *Linn. Gen. ed.* 2 (1742) *in ed.* 3 *omissa et a Linn. f. Suppl.* 40 *pro genere novo descripta.*—Genus unicum. Character ordinis.

Species, uti supra ad 80, ab Alph. DC. l. c. in sectiones 13 distributæ, quæ tamen nobis melius ad 7 sequentes reducendæ videntur:—

1. *Eumyristica* (*Eumyristica* et *Caloneura*, DC.). Antheræ 9–∞ rarius 6, lineares, adnatæ, columna cylindracea v. fusiformi pro maxima parte ab illis obtecta basi breviter nuda. Fructus sæpius majusculus, ovoideus v. oblongus, rarius subglobosus. Flores mediocres v. in ordine majusculi, pedicellati. Species ad 25 Asiaticæ cum una Australiensi, una etiam in aliis terris inquilina. *Hook. Exot. Fl. t.* 155, 156. *Blume, Rumphia, t.* 55 *ad* 59. *Bedd. Fl. Sylv t.* 267 *ad* 269. *A. DC. in Mart. Fl. Bras.* v. i. *t.* 38.

Icon *M laurifoliæ*, Hook. et Thoms.; Bedd. l. c. t. 267, columnæ stamineæ partem nudam exhibet antheris longiorem, in floribus a nobis examinatis breviorem vidimus.

2. *Virola*, A. DC. Antheræ sæpius 3–6, rarissime plures, lineares, adnatæ, columna cylindracea pro maxime parte ab illis obtecta basi breviter nuda. Fructus inter minores, ovoidei globosi v. latiores quam longi. Flores parvuli v. minimi, ♂ numerosi, laxe paniculati. Species ad 12 omnes Americanæ. *A. DC. in Mart. Fl. Bras.* v. i. *t.* 39 *ad* 44. VIROLA, *Aubl. Pl. Gui.* 904, *t.* 345. SEBOPHORA, *Neck. Elem.* ii 188.

M. platysperma, Spruce, A. DC. Prod. xiv. 695, et in Mart. Fl. Bras. v. i. 108, t. 39, ad sectionem Asiaticam refertur ob bracteolarum sub singulis floribus præsentiam. Hæ bracteolæ tamen minutæ et raræ sunt, nec in icone depictæ, et species melius recensenda videtur in sectione Americana *Virola*, ubi etiam in *M. sebifera* bracteolæ minutæ interdum in inflorescentia juvenili observantur.

3. *Pyrrhosa*, Blume. Antheræ 6–∞, lineares, in massam globosam in fundo perianthii sessilem v. subsessilem connatæ. Fructus globosus v. ovoideus, sæpius inter minores. Flores minimi subglobosi, ♂ numerosi paniculati. Species ad 10, Asiaticæ. *Blume, Rumphia, t.* 64. *Wall. Pl. As. Rar. t.* 90. Antheras interdum apice breviter liberas vidimus iis *Gymnacrantheræ* accedentes.

4. *Gymnacranthera* (*Gymnacranthera* et *Compsoneura*, A. DC.). Antheræ 5–6, lineares, ad apicem columnæ brevissimæ v. in fundo perianthii erectæ, conniventes, liberæ v. basi breviter connatæ. Fructus et flores *Pyrrhosæ*. Species 3, Americanæ. *A. DC. in Mart. Fl. Bras.* v. i. 119, *t.* 40, *f.* 2. *Benth. in Hook. Ic. Pl. t.* 1260, cum 2 Asiaticis. *Bedd. Fl. Sylv. t.* 270. His forte addenda species Guianensis inedita, Sagot, n. 1195, antheris pariter in fundo perianthii subsessilibus erectis, sed brevibus nec linearibus.

5. *Otoba* (*Sychnoneura*, *Otoba* et *Iryanthera*, A. DC.). Antheræ sæpius 3, breves, ad apicem columnæ elongatæ tenuis v. prope basin incrassatæ adnatæ. Fructus brevis, interdum latus et prominenter 2-costatus. Flores parvi, paniculati, perianthio sæpe fere 3-partito. Species ad 15, Americanæ. *Humb. et Bonpl. Pl Æquin.* ii. *t.* 103. *Warsz. Pr. Max Reise, Bot.* 66, *t.* 57.

In *M. surinamensi* et affinibus columnæ pars inferior nuda antheræ subæquilonga v. parum longior, in plerisque speciebus iis multo longior. *M. Hostmanni*, columna staminea apice subclavata, sectionem cum *Irya* connectit.

6. *Irya* (*Horsfieldia* et *Irya*, A. DC.). Antheræ 3-6, breves, ad apicem columnæ plus minus clavatæ v. vertice leviter concavæ adnatæ, columnæ parte nuda tenui iis multo longiore. Fructus globosus v. ovoideo-oblongus. Flores parvi nunc minimi, paniculati. Species 4 v. 5, Asiaticæ v. Africanæ. *Wall. Pl. As. Rar. t.* 89. *Blume, Rumphia, t.* 62, 63. *Benth. in Hook. Ic. Pl. t.* 1261, 1262. HORSFIELDIA, *Willd. Spec. Pl.* iv. 872.

In *M. Horsfieldia*, Bl., et in speciebus 2 ex Africa tropica, flores ♂ dense globoso-capitati in receptaculo carnoso sessiles v. brevissime pedicellati, in *M. Irya*, Gærtn., distinctius pedicellati fasciculati. Sectio *Dictyoneura*, A. DC., species unica Madagascariensis nobis ignota, ex charactere dato verisimiliter *Iryæ* adsocianda.

7. *Knema*, Blume. Antheræ 3–6, breves, ad apicem columnæ in discum dilatatæ adnatæ, circa marginem disci distinctæ, radiantes. Fructus globosus v. ovoideus. Flores parvi nunc minimi, paniculati. Species 11, Asiaticæ.—*Blume, Rumphia, t.* 60, 61. *Bedd. Fl. Sylv. t.* 271. KNEMA, *Lour. Fl. Cochinch.* 604.

ORDO CXLII. MONIMIACEÆ.

Endl. Gen. 313. Lindl. Veg. Kingd. 298. Baill. Hist. Pl. i. 289. ATHEROSPERMEÆ, Lindl. Veg. Kingd. 300.

Flores hermaphroditi v. unisexuales, regulares. *Perianthium* inferum, globosum ovoideum turbinatum depressum v. rarius campanulatum, dentibus lobisve sæpe conniventibus 4–∞, 2–∞-seriatim imbricatis, æqualibus v. exterioribus sepaloideis in interiora plus minus petaloidea gradatim v. abrupte mutatis nunc minimis v. rarius obsoletis, perianthio tunc ore subclauso rarius impervio. *Discus* staminifer tubo perianthii alte adnatus, rarius apice breviter liber. *Stamina* sæpius indefinita, pauca v. plurima 1–2-seriata, v. sæpe numerosa discum ∞-seriatim obtegentia, perianthio inclusa; filamenta brevia nunc brevissima, v. subnulla, sæpius complanata, basi utrinque glandula more *Laurinearum* aucta v. nuda. *Antheræ* erectæ, cum filamento continuæ, lateraliter introrsum v. extrorsum 2-loculares, loculis distinctis v. apice confluentibus, rima longitudinali v. valva a basi sursum recurva dehiscentibus. *Staminodia* in fl. ♀ sæpe desunt. *Ovarii* carpella ∞ v. rarissime solitaria, in fundo perianthii sessilia v. disco carnoso tubum vestiente v. implente semi-immersa v. sepulta, 1-locularia, stylo brevi nunc brevissimo v. elongato coronata; stigma terminale, obtusum v. parvum. *Ovulum* unicum, a basi erectum v. ab apice pendulum, excentrice affixum, anatropum v. rarius orthotropum; ovarii rudimenta in fl. ♂ desunt. *Fructus* carpella distincta, rarius solitaria, perianthio aucto inclusa v. perianthio deciduo in receptaculo disciformi v. parvulo sessilia v. stipitata, indehiscentia, sæpius drupacea, exocarpio succoso carnoso v. rarius membranaceo, endocarpio osseo crustaceo v. membranaceo. *Semen* erectum v. pendulum, testa membranacea. *Albumen* carnosum. *Embryo* prope hilum axilis v. rarius ab hilo remotus, minimus v. dimidium albuminis superans, cotyledonibus sæpius ovatis erectis v. divaricatis, radicula infera v. supera.

Arbores fruticesve, rarius scandentes, sæpius fragrantes. Folia opposita v. rarius alterna, integerrima v. irregulariter serrata, coriacea v. rarius membranacea, pennivenia. Stipulæ 0. Flores cymosi v. racemosi rarius solitarii, parvi v. mediocres, inflorescentiis axillaribus v. rarius terminalibus quam folia brevioribus. Bracteæ parvæ v. 0, rarius geminæ inflorescentiam juniorem valvatim includentes.

Species vix 150, Americæ et Asiæ calidioris ins. Mascarensium Australiæ et ins. Maris Pacifici australis incolæ. In Africa diu incognitæ, nunc genere parvo in regione tropica occidentali habitationem sibi vindicant.

Ordo biformis sed bene naturalis, a pluribus botanicis *Anonaceis* approximatur ob gynœcium apocarpicum et embryonem sæpius minimum, sed perianthio calycino apetalo albumine æquabili aliisque notis essentialibus longiuscule recedit. *Laurineis* affinior præsertim tribus *Atherospermea-*

rum quarum antheræ peculiares omnino *Laurinearum*, et olea aromatica in utroque ordine eadem, sed *Monimiaceæ* characteribus cæteris tam floris quam seminis facillime distinguuntur, nec cum ullo alio ordine confundendæ.

FORMÆ ABNORMES.

Folia alterna in speciebus perpaucis *Tambourissæ* et *Siparunæ*, in *Levieria*, *Amborella* et *Glossocalyce*.

Flores juniores bracteis 2 valvatis inclusi in *Atherospermo* et *Doryphora*.

Perianthium ? e squamis imbricatis membranaceis caducissimis in *Piptocalyce* et *Trimenia*; perianthii lobi 8–∞, 2–∞-seriati in *Peumo*, *Hortonia* et *Levieria*.

Gynæcium 1-carpicum in *Piptocalyce* et *Trimenia*.

Stylus in carpellis maturis fere basilaris in *Doryphora* et *Nemuaro*.

Ovulum orthotropum ? in *Daphnandra* et *Amborella*.

Embryo dimidium albuminis æquans v. paullo superans, cotyledonibus rectis in speciebus paucis *Hedycaryæ*, divaricatis extrariisque in *Peumo*.

CONSPECTUS GENERUM.

Tribus I. Monimieæ. Antherarum loculi rima longitudinali bivalvatim dehiscentes, distincti v. apice confluentes. Ovulum pendulum.

* *Drupæ perianthio aucto vertice contracto subclauso omnino inclusæ. Antherarum loculi distincti.*

1. MONIMIA. Perianthium junius poro parvo dentato pervium, ♂ per anthesin in valvas 4–6 fissum. Stamina pleraque basi 2-glandulosa. Carpella in discum perianthium intus vestientem sessilia, v. in eo leviter immersa.—*Ins. Mascar.*

2. TAMBOURISSA. Perianthium *Monimiæ*. Stamina eglandulosa. Carpella in disco perianthium intus vestiente omnino sepulta.—*Ins. Mascar., Java.*

3. PALMERIA. Perianthium ♂ depressum, lobis inflexis clausum. Stamina eglandulosa. Carpella intra perianthium sessilia, libera (v. pulpa circumdata ?). Caulis scandens.—*Australia, Nov. Guinea.*

** *Drupæ in receptaculo disciformi sessiles v. stipitatæ, perianthio cæterum circumscisse deciduo.*

† *Antheræ subsessiles loculis apice in unum confluentibus.*

4. MOLLINEDIA. Perianthii ♂ lobi 4, conniventes. Stamina ∞, intra perianthium irregulariter ∞-seriata. Flores sæpius dioici.—*Amer. trop., Australia.*

5. KIBARA. Perianthii ♂ lobi 4, conniventes. Stamina 4, lobis opposita, 1–4 interiora. Flores sæpius monoici.—*Ind. or., Archip. Malay., Australia.*

6. EPHIPPIANDRA. Perianthium ♂ per anthesin alte 4-fidum. Stamina 4 in lobis solitaria, 6 prope basin loborum. Flores dioici.—*Madagascaria.*

†† *Antherarum loculi paralleli, distincti.*

7. MATTHÆA. Perianthii ♂ ore seriei duplici loborum 4 subclausum. Stamina 4, filamentis brevissimis eglandulosis.—*Archip. Malay.*

8. HEDYCARYA. Perianthii lobi 7–10, parvi, conniventes. Stamina numerosa, filamentis brevissimis eglandulosis.—*Australia, Nov. Zel., Nov. Caledonia, ins. Fiji.*

9. PEUMUS. Perianthii lobi 10–12. Stamina numerosa, filamentis angustis basi utrinque glandula auctis.—*Chile.*

*** *Drupæ in receptaculo parum aucto sessiles v. stipitatæ, perianthii lobis deciduis v. emarcidis.*

10. HORTONIA. Flores hermaphroditi. Perianthii lobi numerosi. Stamina 7–12.—*Ind. or., Zeylan.*

11. LEVIERIA. Flores dioici. Perianthii ♂ segmenta 8, ♀ dentes 4. Stamina numerosa. Folia alterna.—*Nov. Guinea.*

12. AMBORELLA. Flores dioici. Perianthii ♂ lobi 5–7. Stamina numerosa. Folia alterna. —*Nov. Caledonia.*

13? PIPTOCALYX. Flores polygami. Perianthii segmenta v. squamæ ad 6. Stamina ∞, filamentis filiformibus. Ovarii carpellum unicum. Caulis scandens.—*Australia.*

14? TRIMENIA. Flores polygami. Squamæ (perianthii segmenta v. bracteæ) ∞, imbricatæ. Stamina 9–12, filamentis brevissimis. Ovarii carpellum unicum. Caulis arboreus.—*Ins. Fiji.*

Tribus II. Atherospermeæ. Antherarum loculi distincti, valvis sursum a basi ad apicem solutis dehiscentes. Ovulum erectum v. rarius pendulum. Perianthium fructiferum auctum, carpella includens, demum sæpe varie fissum v. circumscissum.

* *Discus carnosus, perianthii ♀ tubum inter carpella implens.*

15. CONULEUM. Perianthium ♂ ante anthesin impervium (per anthesin circumscissum?), ♀ circa disci apicem circumscissum, ore terminali parvo integerrimo.—*Guiana.*

16. SIPARUNA. Perianthium utriusque sexus apice pervium ore undulato v. lobis 4–6 conniventibus subclauso, fructiferum totum persistens.—*Amer. trop.*

17. GLOSSOCALYX. Perianthium utriusque sexus limbo oblique cyathiformi hinc in acumen breve v. longum producto coronatum, fructiferum persistens.—*Afr. trop. occid.*

** *Discus inter carpella sæpius pilosus at non intrusus.*

† *Flores juniores bracteis 2 valvatim involucrantibus inclusi.*

18. ATHEROSPERMA. Flores in involucro solitarii. Antheræ muticæ. Perianthium fructiferum depresso-globosum.—*Australia.*

19. DORYPHORA. Flores in involucro terni. Antheræ connectivo apice longe subulato appendiculatæ. Perianthium fructiferum anguste tubulosum. Stylus excentricus, demum carpello accreto fere basilaris.—*Australia.*

†† *Flores laxe cymosi v. breviter racemosi, exinvolucrati.*

20. NEMUARON. Antheræ introrsum 2-locellatæ. Perianthium fructiferum tubulosum, 2–3-valve. Ovulum erectum. Stylus excentricus, demum carpello accreto fere basilaris.—*Nov. Caledonia.*

21. LAURELIA. Antheræ lateraliter 2-locellatæ. Perianthium fructiferum tubulosum, demum sæpe fissum. Ovulum erectum. Stylus in carpello lineari v. fusiformi terminalis.—*Chile, Nov. Zelandia.*

22. DAPHNANDRA. Antheræ extrorsum 2-locellatæ. Perianthium fructiferum anguste tubulosum. Ovulum pendulum. Stylus in carpello angusto terminalis.—*Australia.*

GENERA EXCLUSA.

CALYCANTHACEÆ, a Baillonio *Monimiaceis* inclusæ, jam supra i. 15 pro ordine distincto ab his perianthio seminibus aliisque notis longe diverso recensitæ sunt.

TRIBUS I. MONIMIEÆ.

1. **Monimia,** *Thou. Hist. Veg. Afr. Austr.* 35, *t.* 9.—Flores dioici. Fl. ♂: Perianthium ovoideum v. globosum, ore minuto 4–6-dentatum, demum in lobos 4–6 valvatos alte fissum. Discus parietem totum vestiens, intus glaber. Stamina numerosa, multiseriata, brevia, filamentis brevibus basi utrinque glandula sæpe stipitata auctis; antheræ ovoideæ, loculis distinctis parallelis lateralibus rima longitudinali subintrorsum dehiscentibus. Fl. ♀: Perianthium globosum, diu subclausum, disco interne piloso. Staminodia 0. Carpella pauca, in disco sessilia v. leviter immersa, in stylum tenuem contracta; ovulum pendulum, anatropum. Drupæ parvulæ, perianthio aucto globoso clauso v. irregulariter fisso inclusæ, endocarpio indurato-crustaceo. Semen pendulum; embryo parvus, in seminibus examinatis imperfectus; cotyledones (ex Tulasneo) divaricatæ.—Frutices. Folia opposita, integerrima, coriacea, sæpe molliter pubescentia. Flores parvuli, ad axillas breviter cymosi.

Species 3, ins. Mascarensium incolæ. *A. DC. Prod.* xvi. ii. 661. *Bory, Voy. Iles Afr. t.* 18 (*Ambora*). *Tul. in Arch. Mus. Par.* viii. *t.* 29.

2. **Tambourissa,** *Sonn. Voy. Ind. Or.* iii. 267, *t.* 134. (Ambora, *Juss. Gen.* 401. Mithridatea, *Schreb. Gen. Pl.* 783.)—Flores dioici v. monoici. Fl. ♂: Perianthium ovoideum v. subglobosum, carnosum, obtusissimum, junius impervium v. apice minute 4–6-dentatum,

demum in lobos 4–6 valvatos patentes alte fissum. Discus parietem totum vestiens. Stamina numerosa, multiseriata, eglandulosa ; antheræ subsessiles, oblongæ, loculis distinctis parallelis lateralibus sæpius undulatis rima longitudinali dehiscentibus. Fl. ♀ : Perianthium subclausum. Staminodia 0. Carpella numerosa, disco carnoso glabro parietem undique vestiente sepulta, stylo brevissimo conico solo intra cavum perianthii e disco prominente ; ovulum pendulum, anatropum. Drupæ intra perianthium auctum carnosum subclausum inclusæ, mediante disco connatæ v. in locellis disci liberæ. Semen pendulum ; embryo brevis, axilis, in seminibus examinatis ¼ longitudinis albuminis, cotyledonibus ovatis v. ellipticis.—Arbores. Folia opposita v. rarius alterna, coriacea. Flores ad axillas v. ad apices ramorum pauci, cymosi v. racemosi, in ordine sæpe majusculi, rarius in paniculam terminalem dispositi.

Species descriptæ 14, quarum una Javanica, cæteræ omnes Mascarenses.—*A. DC. Prod.* xvi. ii. 658. *Tul. in Archiv. Mus. Par.* viii. *t.* 25 *ad* 27 (*Ambora*).

3. **Palmeria,** *F. Muell. Fragm. Phyt. Austral.* iv. 151, v. 2.—Flores dioici. Fl. ♂ : Perianthium hemisphæricum, lobis 4–6 leviter imbricatis plano-conniventibus subclausum. Discus perianthii tubum vestiens intus pilosulum. Stamina numerosa, multiseriata, eglandulosa ; antheræ subsessiles, lanceolatæ, loculis parallelis distinctis rima longitudinali introrsum dehiscentibus. Fl. ♀ : Perianthium subglobosum, ore minuto. Staminodia 0. Carpella numerosa, distincta, perianthio inclusa, stylis filiformibus ex ore breviter exsertis ; ovulum pendulum, anatropum. Drupæ perianthio aucto irregulariter globoso v. pyriformi inclusæ. Semen pendulum ; embryo in speciminibus adhuc imperfectum.—Frutices scandentes (v. arbores ?). Folia opposita, integerrima. Flores parvi, in cymis axillaribus racemiformis v. paniculis parvis plurimi, pedicellati, ebracteati.

Species 1 v. 2 Australienses. *Benth. Fl. Austral.* v. 291, *et in Hook. Ic. Pl. t.* 1263, quibus addidit tertiam e Nova Guinea *Beccari, Malesia,* 186.

4. **Mollinedia,** *Ruiz et Pav. Fl. Per. et Chil. Prod.* 83, *t.* 15 ; *Syst. Veg.* 142. (Tetratome, *Pæpp. et Endl. Nov. Gen. et Sp.* ii. 46, *t.* 163.)—Flores unisexuales, sæpius dioici. Fl. ♂ : Perianthium ovoideum globosum turbinatum v. rarius oblongum, lobis 4 biseriatim imbricatis conniventibus rarius subpatentibus æqualibus v. interioribus majoribus interdumque dentatis. Discus tubo adnatus. Stamina ∞, pauca v. numerosa, irregulariter ∞-seriata ; antheræ ovoideæ v. oblongæ, sessiles v. vix stipitatæ, loculis rima longitudinali dehiscentibus apice in unum confluentibus. Fl. ♀ : Perianthium post anthesin supra discum circumscisso deciduum. Staminodia 0. Carpella numerosa in receptaculo ∞-seriata ; ovulum pendulum, anatropum. Drupæ ∞, ovoideæ, in receptaculo disciformi dilatato sessilia v. stipitata. Semen pendulum ; embryo parvus, axilis, cotyledonibus ovatis rectis, radicula supera. Arbores fructicesve. Folia opposita, integerrima v. dentata. Flores parvuli, in cymis brevibus laxis racemiformibus v. thyrsoideis axillaribus v. subterminalibus pedicellati. Bracteæ minimæ v. 0.

Species ad 30, quarum 3 (v. 4?) Australienses, cæteræ omnes Americæ calidioris incolæ a Brasilia australi usque ad Mexicum.—*A. DC. Prod.* xvi. ii. 663. *Tul. in Archiv. Mus. Par.* viii. 373, *t.* 31 *ad* 33, *et in Mart. Fl. Bras.* iv. i. *t.* 84 *ad* 86. *Benth. Fl. Austral.* v. 286.

5. **Kibara,** *Endl. Gen.* 314. (Brongniartia, *Blum. Bijdr.* 435, *non H. B. et K.* Sciadicarpus, *Hassk. in Flora,* 1842, *Beibl.* ii. 20. Sarcodiscus, *Griff. Notul.* iv. 380; *Ic. t.* 545. Wilkiea, *F. Muell. in Trans. Phil. Inst. Vict.* ii. 64.)—Flores monoici, rarius dioici. Fl. ♂ : Perianthium ovoideum globosum v. hemisphæricum, lobis v. dentibus 4 2-seriatim imbricatis conniventibus subclausum v. rarius magis apertum. Discus tubo adnatus v. superne liber, annularis v. tubulosus. Stamina 5–8, 2-seriata, 4 ad marginem disci lobis dentibusve opposita, 1–4 interiora minora, omnia perianthio breviora ; antheræ subsessiles, loculis rima longitudinali dehiscentibus apice in unum confluentibus. Fl. ♀ : Perianthium post anthesin supra discum circumscissum, deciduum. Staminodia 0. Carpella ∞, in receptaculo conferta, libera ; ovulum pendulum, anatropum. Drupæ ∞, ovoideæ, in receptaculo disciformi dilatato sessiles v. stipitatæ. Semen pendulum ;

embryo parvus, axilis, cotyledonibus ovatis rectis, radicula supera.—Arbores fruticesve. Folia opposita, integerrima v. dentata. Flores parvuli, in cymis paniculisve brevibus axillaribus lateribusve pedicellati. Bracteæ minimæ v. 0.

Species ad 10, Indiæ orientalis, Archipelagi Malayani et Australiæ incolæ.—*A. DC. Prod.* xvi. ii. 670. *Benth. Fl. Austral.* v. 288. *Beccari, Malesia*, 186. *Blum. Mus. Bot.* ii. *t.* 9.

6. **Ephippiandra**, *Dcne. in Ann. Sc. Nat. ser.* 4, ix. 278, *t.* 7.—Flores dioici. Fl. ♂: Perianthium globosum aut pyriforme, junius subclausum 4-dentatum, demum in lobos 4 valvatos patentes fissum. Discus parietem vestiens glabrum. Stamina intra discum 10, 2–3-seriata; antheræ 4 in lobos, 6 ad eorum basin sessiles, transversæ, subreniformes, 1-loculares, rima supera dehiscentes. Fl. ♀: Carpella ∞, exigua, in receptaculo carnoso pateriformi cum basi perianthii persistente confertim sessilia, obtusissima; ovulum pendulum, anatropum. Fructus . . .—Arbuscula habitu *Myrti*. Folia opposita, integra, perennantia. Flores ♂ in axillis 1–2, pedicellati. (*Char. ex Dcne.*)

Species 1, Madagascariensis, a nobis non visa. *A. DC. Prod.* xvi. ii. 662.

7. **Matthæa**, *Blum. Mus. Bot.* ii. 89, *t.* 10. —Flores dioici. Fl. ♂ (a nobis non visi): Perianthium depresso-turbinatum, ore seriei duplici loborum 4 subclausum. Stamina 5, filamentis brevissimis; antheræ ovoideæ, 2-loculares, loculis rima longitudinali dehiscentibus (*Blume*). Fl. ♀: Perianthium depresso-globosum, fere hemisphæricum, junius clausum, per anthesin circumscisse dehiscens. Staminodia 0. Carpella numerosissima, receptaculum latum planum dense obtegentia, sessilia v. breviter stipitata, in stylum oblongum brevissimum desinentia; ovulum pendulum, anatropum. Drupæ carnosæ, in receptaculo disciformi pedicellatæ. Semen pendulum, albumine carnoso duro; embryo teres, rectus, longiusculus, radicula supera, cotyledonibus brevibus rectis.—Frutex. Folia opposita, coriacea, integerrima v. remote serrulata, glabra. Flores ad axillas v. ad nodos vetustos ramorum fasciculati, pedicellati.

Species unica, Archipelagi Malayani incola.—*A. DC. Prod.* xvi. ii. 669.

8. **Hedycarya**, *Forst. Char. Gen.* 127, *t.* 64.—Flores dioici. Fl. ♂: Perianthium depressum v. hemisphæricum, lobis 7–10 parvis inflexis subclausum. Discus adnatus, parietem fere totum vestiens. Stamina numerosa, discum fere totum obtegentia; antheræ subsessiles, loculis distinctis parallelis a latere rima longitudinali dehiscentibus. Fl. ♀: Perianthium sub anthesi supra basin disciferum circumscissum deciduum. Staminodia 0. Carpella numerosa, discum obtegentia, sessilia, in stylum brevem obtusum desinentia; ovulum pendulum, anatropum. Drupæ mediocres v. parvæ, in receptaculo disciformi stipitatæ v. sessiles. Semen pendulum, albuminosum; embryo axilis, brevis v. dimidio albuminis longior, cotyledonibus rectis, radicula supera.—Arbores fruticesve. Folia opposita, integerrima v. dentata, coriacea. Flores ad axillas breviter cymosi v. in paniculas breves racemiformes dispositi. Bracteæ parvæ v. 0.

Species ad 8, una Novo-Zelandica, altera Australica, cæteræ Novæ Caledoniæ v. ins. Fiji incolæ. *A. DC. Prod.* xvi. ii. 672. *Baill. Adans.* ix. 132. *A. Rich. Fl. Nov. Zel. t.* 33 (*Zanthoxylum*). *Raoul, Choix Pl. N. Zel. t.* 30. *Tul. in Archiv. Mus. Par.* viii. *t.* 34.

In plerisque speciebus fructus carpella plura sed non numerosa stipitata, inter quas in *H. dentata* embryonem invenimus dimidium longitudinis albuminis superantem, cotyledonibus amplis ellipticis fere ut in icone *A. Richardi*, supra citata, depictus est. In specie Novo-Caledonica fructu simili, embryo vix quartam partem albuminis attingit, cotyledonibus orbiculatis radicula vix longioribus. In *H. angustifolia*, A. Cunn.; Benth. Fl. Austral. v. 291; F. Muell. Pl. Vict. t. suppl. 2, carpella numerosa, parva, globosa, in receptaculum carnosulum sessilia, fructum *Mori* simulant. In his embryonem vidimus subteretem, cotyledonibus parum dilatatis.

9. **Peumus**, *Pers. Syn.* ii. 629. (Ruizia, *Ruiz et Pav. Fl. Per. et Chil. Prod.* 135, *t.* 29; *Syst. Veg.* 266, *non Cav.* Boldea, *Juss. in Ann. Mus. Par.* xiv. 134.)—Flores dioici. Fl. ♂: Perianthii tubus late campanulatus, lobi 10–12, 2–3-seriatim imbricati, exteriores herbacei v. membranacei, interiores magis petaloidei. Discus calycis tubum vestiens,

intus pilosus. Stamina numerosa, in disco ∞-seriata, tubo inclusa; filamentis angustis brevibus basi utrinque glandula substipitata auctis; antheræ 2-loculares, loculis distinctis parallelis a latere rima longitudinali dehiscentibus. Fl. ♀: Perianthium masculo minus, lobis minoribus magis inæqualibus, post anthesin supra basin disciferam circumscissum, deciduum. Staminodia pauca, parva. Carpella ∞, in fundo perianthii sessilia, tomentosa, in stylum brevissimum desinentia; ovulum pendulum, anatropum. Drupæ 2-5, rarius solitariæ, in receptaculo discoideo brevissime stipitatæ, parvulæ. Semen pendulum, albumine copioso; embryo juxta hilum, cotyledonibus amplis divaricatis radicula supera longioribus.—Arbuscula sempervirens, fragrans. Folia opposita, coriacea, scabra, subtus elevato-venosa. Flores albi, in cymas terminales foliis breviores v. vix longiores dispositi.

Species 1, Chilensis. *A. DC.* ! *Prod.* xvi. ii. 674. *Endl. Iconogr. t.* 21 (*Ruizia*). *Bot. Reg.* 1845. *t.* 57 (*Boldoa*).

Embryo ab auctoribus minimus dicitur; in seminibus tamen a nobis examinatis dimidium saltem albuminis longitudinem æquantem invenimus, qualis in Lindl. Veg. Kingd. 298 depictus, albumine tamen inclusus nec extrarius.

Persoon primus nomen *Peumi* generi Pavoniano attribuit. Peumus, *Molin.*, est genus fictum hexandrum, e characteribus generum variorum *Monimiacearum* et *Laurinearum* compositum.

10. **Mortonia**, *Wight, ex Arn. in Mag. Zool. and Bot.* ii. 545.—Flores hermaphroditi. Perianthii tubus brevis, campanulatus, lobi ∞ (ultra 20), ∞-seriatim imbricati, ab extimis latis sepaloideis in intimos petaloideos spathulatos v. lineares gradatim mutati. Discus tubum vestiens, intus pilosus. Stamina 7-12, ad marginem disci 1-2-seriatim affixa, lobis breviora, filamentis brevibus angustis basi utrinque glandula magna auctis; antheræ ovatæ, loculis distinctis parallelis extrorsum rima longitudinali dehiscentibus. Carpella in centro perianthii ∞, sessilia, in stylum brevem nunc brevissimum contracta, stigmate tenui v. parum dilatato; ovulum pendulum, anatropum. Drupæ oblique ovatæ, in receptaculo vix incrassato breviter stipitatæ, perianthii reliquiis emarcidis circumdatæ. Semen late ovatum, plano-compressum, albumine carnoso; embryo axilis, brevis, cotyledonibus obovatis erectis v. divergentibus radicula supera longioribus.—Frutices fragrantes. Folia opposita, integerrima, coriacea, penninervia v. subtriplinervia. Flores pallide flavi, in cymis laxis brevibus ad axillas pedunculatis haud numerosi. Bracteæ parvæ v. 0.

Species v. varietates insignes 2 v. 3, Zeylaniæ et Peninsulæ Indiæ Orientalis incolæ. *A. DC. Prod.* xvi. ii. 672. *Wight, Ic. t.* 1997, 1998.

11. **Levieria**, *Beccari, Malesia*, 192.—Flores monoici. Fl. ♂: Perianthii tubus subnullus, segmenta 8, 4 exteriora 2-seriatim subsepaloidea, 4 interiora subpetaloidea. Stamina numerosa, ∞-seriata, exteriora segmentis interioribus subconformia, interiora minora angustiora, connectivis apice subtruncatis; antheræ (subsessiles?), loculis lateralibus distinctis rima longitudinali dehiscentibus. Fl. ♀: Perianthium subglobosum, urceolatum, apice 1-bracteatum, ore 4-dentato-lobato, dein irregulariter fissum, intus pilosum. Carpella ∞, receptaculo acervata, ovoideo-oblonga, stylo crasso corniculato terminata; ovulum pendulum, anatropum. Drupæ ovoideæ, receptaculo incrassato margine reflexo insidentes, endocarpio crustaceo; embryo minutus, axilis, cotyledonibus ovatis divergentibus radicula supera longioribus.—Frutex innovationibus tomentosis. Folia alterna, elliptica v. elliptico-lanceolata, apicem versus obtusissime repando-dentata, longe acuminata. Racemi axillares, foliis breviores, subsimplices v. parce ramosi. Drupæ in receptaculo fructifero sessiles, parvæ. (*Char. ex Beccari.*)

Species 1, Novæ Guineæ et Amboynæ incola, a nobis non visa.

12. **Amborella**, *Baill. Adans.* x. 354.—Flores dioici. Fl. ♂: Perianthium hemisphæricum, lobis 5-7 sub-2-seriatis latis conniventibus. Discus tubum vestiens intus leviter pilosus. Stamina ∞ (ultra 20), ∞-seriata, inclusa, filamentis brevissimis latis eglandulosis; antheræ oblongæ, loculis distinctis parallelis rima longitudinali introrsum dehis-

centibus. Fl. ♀ ignoti. Fructus carpella ∞ (3–6) parvula, in receptaculo parvo stipitata, oblique ovali-oblonga, compressiuscula, vix drupacea, rete elevato rugosa, stylo brevi coronata, pericarpio sicco indurato-crustaceo. Semen juxta apicem funiculo laterali affixum, pendulum, testa membranacea, albumine carnoso, embryone minuto ex obs. Bailloni ad extremitatem inferam ab hilo remoto.—Frutex subsarmentosus. Folia alterna, ovali-oblonga, pennivenia, reticulato-venulosa, margine integerrima v. undulato-repanda. Flores parvi, cymis laxis brevibus ad axillas subsessilibus. Bracteæ 0.

Species 1, Novo-Caledonica, foliis alternis et fructibus parvis valde rugosis fere echinatis insignis, quoad flores fœmineos ulterius inquirenda. Embryonem minutum in seminibus examinatis haud deteximus.

13? **Piptocalyx,** *Oliv. in Benth. Fl. Austral.* v. 292.—Flores polygami. Perianthii tubus discifer brevissimus v. 0, segmenta ad 6, 2-seriatim imbricata, subæqualia, membranacea, squamiformia, caducissima. Stamina ∞, filamentis breviter filiformibus; antheræ oblongo-lineares, filamento subæquilongæ, loculis distinctis parallelis rima longitudinali dehiscentibus. Ovarii carpellum in fl. ☿ 1, sessile, stigmate lato sessili; ovulum pendulum, anatropum. Fructus ignotus.—Frutex scandens. Folia opposita, integerrima, pennivenia. Flores parvi, racemosi, flore terminali hermaphrodito, lateralibus masculis oppositis brevissime pedicellatis. Bracteæ parvæ, caducissimæ.

Species 1, Australiæ orientalis incola.

14? **Trimenia,** *Seem. Fl. Vit.* 425, *t.* 99.—Flores polygami. Squamæ numerosæ, ovatæ, membranaceæ, ∞-seriatim imbricatæ, ab exterioribus (bracteis?) in interiores (perianthii segmenta?) gradatim increscentes, stamina pistillumque includentes, anthesi peracta caducissimæ. Fl. ♂: Stamina 9–12, toro 2–3-seriatim affixa, filamentis brevissimis liberis; antheræ magnæ, lineari-oblongæ, loculis lateraliter adnatis parallelis longitudinaliter subextrorsum dehiscentibus, connectivo ultra loculos in conum brevem producto. Ovarii rudimentum parvum. Fl. ♀ v. pseudohermaphroditi: Stamina marium nisi minora antheris tenuibus ut videtur effœtis. Ovarii carpellum 1, oblongum, 1-loculare; stigma in vertice oblique truncato sessile, latum, undique papilloso-penicillatum; ovulum 1, ab apice loculi pendulum, anatropum. Fructus . . . . —Arbor (*Seemann*) glabra ramulis interdum lineis a petiolo decurrentibus angulatis. Folia opposita, petiolata, leviter serrata, pennivenia, venis primariis transversis parallelis. Flores laxe racemulosi, racemulis in axillis superioribus v. ad apices ramorum paniculatis, paniculis ebracteatis v. bracteis minutis caducis, pedicellis brevibus. Flores plerique ♂, nonnulli ☿ v. ♀ in panicula irregulariter dispositi.

Species 1, ins. Fiji incola. Genus evidenter *Piptocalyci* valde affine, et forte melius notum illi adjungendum, sed seminis structura in utroque ignota locus systematicus adhuc dubius; a *Ternstrœmiaceis* quibus adsociavit Seemann certe longe distans.

TRIBUS II. ATHEROSPERMEÆ.

15. **Conuleum,** *A. Rich. in Mem. Soc. Hist. Nat. Par.* i. 391, *t.* 25—Flores dioici (rarius monoici?). Fl. ♂: Perianthium obovoideo-clavatum, in speciminibus nostris integerrimum, impervium (an demum circumscissum?). Discus in fundo perianthii brevis, carnosulus, parum prominens; antheræ in disco sessiles, in speciminibus nostris 7–8, 4 ad marginem disci latæ, apice introrsum 2-locellatæ, locellis valvis sursum dehiscentibus, 3–4 interiores angustiores, truncatæ, locellis parvis v. effœtis. Pistilli rudimentum 0. Fl. ♀: Perianthium ovoideum, apice ore parvo integerrimo pervium, per anthesin ad apicem tubi circumscissum, parte libera decidua. Discus carnosus intus inter carpella intrusus, cavum in loculos dividens, supra tubum prominens, in conum apice poro parvo pervium productus. Carpella in loculis disci plus minus inclusa, in stylos tenues demum ultra conum prominentes desinentia, libera v. superne cohærentia; ovulum erectum, anatropum. Fructus . . . . —Arbuscula ramulis foliis inflorescentiaque more *Elæag-*

norum lepidotis. Folia opposita, integerrima. Flores parvuli, in cymas breves axillares dispositi, ♂ pedicellati, ♀ subsessiles.

Species 1, Cayennensis. *A. DC. Prod.* xvi. ii. 643 (*Siparunæ* sect.). Specimina 2 tantum vidimus, ♂ a Martinio, ♀ a Sagotio lecta.

16. **Siparuna,** *Aubl. Pl. Gui.* 864, *t.* 333. (Citrosma, *Ruiz et Pav. Fl. Per. et Chil. Prod.* 134, *t.* 29 ; *Syst. Veg.* 263.)—Flores polygamo-dioici v. rarius monoici. Perianthii tubus ovoideus subglobosus obconicus v. urceolatus, superne interdum carnosus valdeque dilatatus ; limbus brevis, connivens, ore undulato v. breviter lateque 4–6-lobo, rarius breviter expansus. Discus tubo adnatus, in fl. ♂ ad faucem pone antheras annulatus v. vix prominens, in fl. ♀ carnosus, intra tubum plus minus inter carpella intrusus, cavum in loculos dividens, ad faucem sæpe prominens et circa stylos connivens. Stamina fl. ♂ pauca v. numerosa, perianthio inclusa ; antheræ sessiles v. in filamenta brevia lata contractæ, ad marginem disci 1-seriatæ v. intra discum 2–∞-seriatæ, introrsum prope apicem 2-locellatæ, locellis valvis sursum dehiscentibus ; interiores dum adsint sæpe angustiores locellis interdum effœtis. Carpella fl. ♀ pauca v. plura, singula locellis disci plus minus inclusa, in stylum desinentia ; styli liberi v. apice connati e perianthio demum breviter exserti ; ovulum e basi loculi erectum, anatropum. Fructus ficiformis perianthio cum disco aucto sæpius carnoso intus irregulariter ∞-loculato, Drupæ in loculis fructus liberæ, exocarpio sæpius tenui, endocarpio fragili v. duro lævi rugoso v. echinato. Semen erectum, testa membranacea, albumine copioso ; embryo juxta hilum minimus.—Frutices v. arbusculæ odore grato, indumento simplici rarius stellato v. lepidoto. Folia sæpius opposita. Flores laxe cymulosi, cymulis geminatim axillaribus v. in ramis vetustis lateralibus folio multo brevioribus, pedicellis sæpius brevibus.

Species ad 60, per Americam tropicam late dispersæ. *A. DC. Prod.* xvi. ii. 643 (*excl. sect. Conuleæ*). *Tul. in Archiv. Mus. Par.* viii. *t.* 28 *ad* 30, *et in Mart. Fl. Bras.* iv. i. *t.* 82, 83 (*Citriosma*). *Pœpp. et Endl. Nov. Gen. et Sp. t.* 164 (*Citrosma*).

17. **Glossocalyx,** *Benth. in Hook. Ic. Pl. t.* 1301, 1302.—Flores dioici. Fl. ♂ : Perianthii tubus campanulatus, ore latiusculo annulo interiore carnoso semiclauso, limbus late et oblique cyathiformis, valde inæqualiter 5-dentatus v. sublobatus, uno latere in acumen lanceolatum breve v. longe linguiforme productus. Discus tubo adnatus, in fl. ♂ præter annulum faucis parum prominens, in fl. ♀ carnosus, intra tubum plus minus inter carpella intrusus, cavum in loculos dividens, ab annulo faucis subdistinctus. Stamina ∞, perianthio inclusa, intra discum 2–3-seriata, filamentis brevibus latis subconnatis ; antheræ ad apicem filamenti sessiles, ovatæ, introrsum 2-locellatæ, valvis sursum dehiscentes. Carpella fl. ♂ ∞, singula locellis disci plus minus inclusa, in stylum desinentia ; styli liberi, e perianthii fauce breviter exserti ; ovulum e basi loculi erectum. Fructus immaturus (in *G. longicuspide*) subglobosus, angulatus, carnosus, limbo perianthii emarcido coronatus, maturum non vidimus, sed verisimiliter ei *Siparunæ* similis.—Arbores ramulis gemmisque novellis pilis rigidulis pubescentibus. Folia alterna, breviter petiolata, longe oblonga v. obovali-oblonga, acuminata, pennivenia. Flores ad axillas pauci, fasciculati, breviter pedicellati.

Species 2, Africæ tropicæ occidentalis incolæ. Genus *Siparunæ* affine, differt patria, foliis omnibus alternis et perianthii forma peculiari.

18. **Atherosperma,** *Labill. Pl. Nov. Holl.* ii. 74, *t.* 224.—Flores polygamo-monoici v. dioici. Fl. ♂ : Perianthii tubus brevis, late campanulatus ; lobi 8, rarius 10, subæquales, 2-seriatim imbricati, exterioribus parum latioribus. Discus tubum vestiens. Stamina 10–12, inclusa, margine disci 2–3-seriatim affixa, filamentis brevibus planis utrinque glandula aliformi auctis ; antheræ breves, latæ, extrorsum 2-locellatæ, locellis valvis sursum dehiscentibus. Fl. ♀ : Perianthii tubus campanulatus ; lobi quam in masculo minores, nonnulli v. fere omnes sæpe caducissimi v. deficientes. Staminodia numerosa, ∞-seriata. Carpella in fundo perianthii numerosa, libera, in stylos longiusculos desinentia ; ovulum erectum, anatropum. Perianthium fructiferum depresso-globosum, ore

leviter contracto staminodiis persistentibus quasi denticulato. Carpella angusta, in stylos longos exsertos plumosos desinentia, sicca, pericarpio tenui. Semen erectum, testa membranacea; embryo in basi albuminis carnosi brevis, axilis, cotyledonibus brevibus rectis, radicula infera.—Arbor. Folia opposita, integerrima v. dentata. Flores ad axillas solitarii, breviter pedunculati, intra bracteas 2 cymbiformes valvatim involucrantes demum deciduas sessiles.

Species 1, Australiana. *Benth. Fl. Austral.* v. 284.

19. **Doryphora**, *Endl. Gen. Pl.* 315; *Iconogr. t.* 10. (Learosa, *Reichb. ex Endl. Gen. Pl. Suppl.* ii. 35.)—Flores hermaphroditi. Perianthii tubus per anthesin brevissimus campanulatus, post anthesin auctus cylindraceus; lobi 6, 2-seriatim imbricati. Discus adnatus, tenuis. Stamina perfecta sæpius 6, ad apicem tubi lobis opposita, filamentis brevibus basi utrinque glandula aliformi auctis; antheræ extrorsum 2-locellatæ, locellis valvula sursum dehiscentibus, connectivo in acumen longum subulatum producto. Staminodia intra stamina 6–12. Carpella ∞, in fundo perianthii sessilia, distincta, stylo elongato mox laterali; ovulum erectum, anatropum. Perianthium fructiferum cylindraceum, sæpe fissum, lobis caducis. Carpella sicca a latere accreta, ascendentia, stylo longo plumoso demum fere basali; pericarpium tenue. Semen erectum, maturum ignotum.—Arbor. Folia opposita, dentata. Flores axillares, intra bracteas 2 cymbiformes valvatim involucrantes terni, sessiles, capitulo breviter pedunculato.

Species 1, Australiana. *Benth. Fl. Austral.* v. 283.

20. **Nemuaron**, *Baill. Adans.* x. 351.—Flores hermaphroditi. Perianthii tubus per anthesin brevis; lobi 6–8, 3–4-seriati. Stamina 4–8, filamentis basi utrinque glandula auctis; antheræ introrsum 2-locellatæ, locellis valvis sursum dehiscentibus, connectivo haud producto. Staminodia ∞, interiora, parva. Carpella pauca, anguste conica, receptaculo tubum perianthii vestienti adnata, stylo longo fragilissimo; ovulum erectum. Perianthii tubus fructifer auctus, carnosus, 2–3-valvatim fissus, carpellis lateraliter accretis subhippocrepiformibus, stylo laterali fere basilari. Pericarpium semini adnatum.—Frutices glabri. Folia opposita, coriacea, crenato-dentata. Flores pauci, in cymas breves axillares dispositi.

Species 2, Novo-Caledonicæ, una tantum nobis nota e specimine vix perfecto, charactere partim ex Baill. l. c.

21. **Laurelia**, *Juss. in Ann. Mus. Par.* xiv. 134. (Pavonia, *Ruiz et Pav. Fl. Per. et Chil. Prod.* 127, *t.* 28, *Syst. Veg.* 253.)—Flores polygamo-monoïci v. dioici. Fl. ♂: Perianthii tubus brevis, campanulatus; lobi 6–12, 2–3-seriati, subæquales v. exteriores breviores. Stamina 6–12, filamentis brevibus utrinque glandula oblonga auctis; antheræ connectivo brevissimo apiculatæ, locellis lateralibus oblongis valvis sursum dehiscentibus. Fl. ♀ v. ☿: Perianthium post anthesin auctum, ovoideo-cylindraceum v. anguste tubulosum, demum 2–3-valvatim fissum. Stamina interiora v. omnia ad staminodia parva reducta. Carpella ∞, lineari-fusiformia, longe pilosa, in stylos longos plumosos demum exsertos desinentia; ovulum erectum, anatropum. Seminis embryo in basi albuminis axilis, brevis, cotyledonibus brevibus rectis v. parum divergentibus, radicula infera.—Arbores elatæ, grate odoræ. Folia opposita, coriacea, integerrima v. serrato-dentata. Cymæ v. racemi axillares, folio breviores.

Species 2, altera Chilensis, altera Novo-Zelandica. *A. DC. Prod.* xvi. ii. 675. *Hook. Fl. N. Zel.* i. 218, *t.* 51. Embryonem vidimus usque ad tertiam partem albuminis attingentem. Genus ab *Atherospermo* inflorescentia staminibus aliisque notis bene distinctum videtur.

22. **Daphnandra**, *Benth. Fl. Austral.* v. 285.—Flores hermaphroditi. Perianthii tubus brevis, per anthesin campanulatus, post anthesin auctus, anguste cylindraceus; lobi ∞, 4 exteriores herbacei per paria oppositi, 6–8 interiores longiores, subpetaloidei, 2-seriati. Stamina perfecta 4–5, filamentis planis utrinque glandula aliformi auctis; antheræ breves, extrorsum 2-locellatæ, locellis valvis sursum dehiscentibus. Staminodia intra stamina ∞,

sub-2-seriata, interiora glanduliformia. Ovarii carpella ∞, glabra, in stylum pilosum desinentia; ovulum ex apice loculi pendulum, orthotropum! Perianthium fructiferum anguste tubulosum. Carpella pauca, inclusa, angusta, stylis longis plumosis demum exsertis. Pericarpium tenue, semini adnatum; albumen copiosum; embryonem in seminibus vix maturis non deteximus.—Arbor. Folia opposita, petiolata, serrata v. rarius integerrima. Flores parvi, in cymas v. paniculas thyrsoideas axillares dispositi. Bracteæ parvæ, caducissimæ.

Species nobis nota 1, Australiensis. *Tul. in Archiv. Mus. Par.* viii. *t.* 31 (*Atherosperma*) alteram addidit *F. Muell. Fragm. Phyt. Austral.* x. 105, a nobis non visam. Genus *Laureliæ* pluribus notis affine, differt tamen staminibus, et ovulum in floribus plurimis e variis speciminibus iterum iterumque examinatis semper pendulum invenimus, nec a basi erectum ut in omnibus cæteris *Atherospermeis*.

Ordo CXLIII. LAURINEÆ.

Lindl. Veg. Kingd. 535. Endl. Gen. 315. Nees, Laurin. Expositio, Vratislaviæ. 1833; Syst. Laurinearum, Berolini, 1836. Baill. Hist. Pl. ii. 429. Cassythaceæ, Lindl. Veg. Kingd. 538. Hernandiaceæ, Endl. Gen. 332. Lindl. Veg. Kingd. 531, sub Thymelæaceis.

Flores hermaphroditi v. abortu polygami v. dioici, regulares. *Perianthium* inferum v. rarius ovario adnato subsuperum, tubo brevi nunc brevissimo, patente campanulato ovoideo v. rarius oblongo, post anthesin immutato v. varie aucto; limbi segmenta ad normam 6 v. rarius 4 (in *Icosandra* 10!) duplici serie imbricata v. rarius in quaque serie subvalvata, inter se similia parva herbacea v. petaloidea et æqualia, v. exteriora minora v. rarius paullo majora, rarissime hinc inde abortiva v. numero aucta. *Stamina* v. staminodia ad normam numero segmentorum duplo plura iisque opposita, in ordines 4 v. series 2 disposita ad apicem tubi v. infra segmenta disco staminifero tubo adnato affixa, ordinis primi segmentis exterioribus ordinisque secundi segmentis interioribus opposita seriem exteriorem formantia, ordinis tertii primis et ordinis quarti secundis opposita seriem interiorem efficientia; in speciebus paucis numerus staminum auctus v. hinc inde abortu reductus, v. stamina ordinis unius alteriusve (ordinis quarti sæpissime) ad staminodia reducta; filamenta libera, sæpius plus minus complanata, brevia brevissima v. antheris paullo rarius duplo longiora, ordinis tertii et quarti dum adsint basi v. prope basin utrinque glandula magna globosa v. capitata sessili v. stipitata aucta, seriei exterioris nuda v. rarissime pariter 2-glandulosa. *Antheræ* erectæ, cum filamento continuæ, complanatæ v. rarius obovoideæ, seriei exterioris facie interiore locellis 2 v. 4 sæpius connectivo crassiusculo immersis præditæ, valvulis tot quot locella a basi ad apicem dehiscentes; ordinis tertii in generibus pluribus reversæ. *Ovarium* in fundo perianthii sessile, per anthesin (excepta *Hernandia*) liberum, in generibus paucis post anthesin tubo accretum quasi inferum, uniloculare et verisimiliter e carpello unico constans. *Stylus* terminalis, brevis, brevissimus v. ovario paullo longior, simplex, interdum leviter obliquus v. incurvus; stigma nunc parvum obtusum, nunc plus minus in laminam recurvam v. discum integrum v. irregulariter lobatum dilatatum. *Ovulum* 1 (addito rarius secundo mox abortivo), apici loculi lateraliter affixum, pendulum, anatropum. *Fructus* baccatus carnosus v. rarius drupaceus v. siccus, indehiscens, perianthio deciduo nudus, v. perianthio toto v. partim persistente immutato v. varie aucto disciformi v. cupulato impositus v. basi cinctus, v. perianthii tubo apice clauso omnino inclusus, intra quem liber v. cum eo arcte concretus quasi inferus, pedicello fructifero interdum incrassato. *Semen* pendulum, exalbuminosum; testa membranacea sæpius pericarpio adnata v. maturitate omnino evanida, rarius inter cotyledones intrusa dissepimentum spurium mentiens. *Embryo* rectus; cotyledones

crasso-carnosæ, sæpius sibi arcte appressæ, interdum demum conferruminatæ; radicula supera, inter cotyledones retracta; plumula conspicua.

Arbores fructicesve (excepta *Cassytha*), sæpius (excepta *Hernandia*) oleo æthereo aromatico scatentes, ligno sæpe durissimo interdum fœtido. Folia alterna v. sparsa, rarius et vix stricte opposita, coriacea et perennantia, rarius membranacea et annua, sæpius (excepta *Hernandia*) glanduloso-punctata, pennivenia v. plus minus distincte 3–5-nervia, inter venas sæpius copiose venuloso-reticulata, indivisa v. rarius 2–3-loba, cæterum integerrima; in *Cassytha* caules herbacei, volubiles, aphylli. Stipulæ 0. Flores parvi, nunc minimi, virentes v. flavi, sæpius cymosi umbellati v. capitati, cymulis umbellis capitulis v. rarius floribus singulis racemosis paniculatis v. subsolitariis, racemis paniculisve axillaribus v. ad basin innovationum lateralibus v. subterminalibus, rarius ramulum hornotinum revera terminantibus. Gemmæ foliigenæ uti florigenæ interdum ante evolutionem squamis imbricatis mox deciduis obtectæ (sic dictæ *perulatæ*). Bracteæ sub ramulis inflorescentiæ pedicellisque sæpius parvæ caducissimæ v. 0, rarius diutius persistentes, in generibus paucis 4–6 sub umbellis v. capitulis involucrum globosum formantes; bracteolæ sub floribus desunt. Indumentum dum adsit e pube brevi sæpe ferruginea pilis simplicibus constat.

Species descriptæ ad 900, plures tamen valde dubiæ, pro maxima parte regionum calidiorum Americæ, Asiæ, Australiæ et insularum maris Pacifici incolæ, paucæ extratropicæ per Americam tam borealem quam australem, regionem Mediterraneam, insulas Canarienses, Africam australem et Novam Zelandiam dispersæ, perpaucæ hucusque in Africa tropica detectæ.

Ordo distinctissimus ab omnibus botanicis admissus, perianthio fructu et præsertim staminum indole facillime dignoscendus. Antherarum dehiscentia peculiaris in solis *Monimiaceis* (*Atherospermiis*), *Berberideis* et quodammodo in *Hamamelideis* paucis repetitur. Priores quæ aroma aliisque nonnullis characteribus *Laurineis* accedunt differunt perianthio, gynœcio pleiocarpico, albumine copioso, etc., *Berberideæ* et *Hamamelideæ* characteribus fere omnibus præter staminales.

'Ordinis magni summeque naturalis genera rite definiendi et in tribus bene circumscriptas distribuendi negotium est difficillimum, et propter floris fructusque structuram in permultis nimis imperfecte adhuc cognitam etiam nunc nequaquam absolutum.' (*Meisn. in DC. Prod.* xv. i. 3). Genera a Neesio inordinate multiplicata fuerunt, ad characteres sæpe in speciebus singulis haud raro minus accurate observatos, et Meissner rite plurima cum aliis conjunxit. Quæ servavit sæpe ad perianthii fructiferi naturam distinxit, sed etiam hic character valde incertus est. In dimidio saltem specierum descriptarum fructus adhuc ignotus est; in aliis speciebus specimina fructifera sola absque floribus nobis adsunt, et haud raro species accuratius observatæ aliter quam in Prodromo distribuendæ sunt. Dolendum est insuper quod Nees interdum genera antiqua a Jussiæo aliisque accurate definita neglexit, et nominibus novis signavit in Prodromo incaute servatis. Plurima igitur mutare non libentes coacti sumus, et inter genera hic definita (e.g. inter *Perseam* et *Ocoteam*) species plurimæ adsunt, fructibus ignotis incertæ, v. forte revera intermediæ. Habitus sæpe in eodem genere diversus, in generibus diversis idem.

CONSPECTUS GENERUM.

Tribus I. Perseaceæ. Arbores fructicesve foliati. Stamina ordinis tertii reversa, antheris extrorsum locellatis, valvis sursum dehiscentibus. Folia sæpissime perennantia. Inflorescentiæ sæpius laxæ, pedunculatæ. Stamina ordinis primi et secundi eglandulosa, perfecta v. ad staminodia parva reducta v. interdum 0; ordinis tertii perfecta v. rarius elocellata (staminodia), fere semper basi 2-glandulosa; ordinis quarti ad staminodia eglandulosa reducta v. 0.

* *Antheræ 2-locellatæ. Fructus perianthii tubo aucto vertice clauso omnino obtectus v. ei adnatus quasi inferus.*

1. Cryptocarya. Flores 3-meri. Perianthii limbi segmenta subæqualia, embryonis cotyledones integræ.—*Asia trop., Australia, Nov. Zel., Afr. austr., Amer. trop. et austr.*

2. Ravensara. Seminis lobi 6 in totidem loculos spurios pericarpii descendentes. Cætera *Cryptocaryæ*.—*Madagasc.*

3. Cyanodaphne. Perianthii limbi segmenta exteriora multo minora. Cætera *Cryptocaryæ*.—*Asia trop.*

4? Icosandra. Flores 5-meri. Fructus ignotus.—*Chile.*

** *Antheræ 2-locellatæ. Fructus nudus v. perianthii tubo aucto cinctus, maturus semper apice exsertus.*

† *Stamina perfecta 9.*

5. Apollonias. Flores hermaphroditi. Staminodia ordinis quarti evoluta. Bacca perianthio parum aucto indurato 6-fido stipata.—*Ins. Canar., Penins. Ind. or.*

6. Beilschmiedia. Flores hermaphroditi. Staminodia ordinis quarti evoluta. Bacca pedicello vix incrassato insidens, perianthio v. deciduo v. immutato.—*Asia trop., Australia, Nov. Zel., Afr. trop., Amer. trop.*

7. Dehaasia. Flores hermaphroditi. Perianthii segmenta exteriora parva. Staminodia 0. Bacca pedicello carnoso-incrassato insidens, perianthio deciduo.—*Archip. Malay.*

8. Aydendron. Flores hermaphroditi v. polygamo-dioici, inflorescentia utriusque sexus subsimili. Staminodia ordinis quarti pauca parva v. 0. Perianthium sub fructu auctum cupulatum induratum.—*Amer. trop.*

9. Ampelodaphne. Flores stricte dioici, paniculis ♂ laxe ramosissimis floribundis, ♀ dense v. interrupte spiciformibus. Staminodia in fl. ♂ 0. Perianthium sub fructu auctum cupulatum truncatum vix induratum.—*Amer. trop.*

†† *Stamina ordinis primi et secundi sola perfecta.*

10. Aiouea. Flores 3-meri. Staminodia ordinis tertii angusta, basi 2-glandulosa, ordinis quarti ovata v. 0. Bacca pedicello incrassato perianthii reliquiis coronato insidens.—*Amer. trop.*

11? Potameia. Flores 2-meri. Staminodia ordinis tertii angusta, basi 2-glandulosa, ordinis quarti minima v. 0. Bacca perianthio parum aucto segmentis reflexis insidens.—*Madagasc.*

††† *Stamina ordinis tertii sola perfecta.*

12. Endiandra. Antheræ liberæ. Perianthium deciduum v. sub fructu immutatum.—*Asia trop., Australia, Amer. trop.*

13. Acrodiclidium. Antheræ liberæ. Perianthium fructiferum cupulatum induratum, margine sæpe duplici.—*Amer. trop.*

14. Misanteca. Antheræ in columnam circa pistillum connatæ.—*Amer. trop.*

*** *Antheræ 4-locellatæ (interiores nonnullæ rarius abortu 2-locellatæ. Fructus nudus v. perianthii tubo aucto cinctus, maturus semper apice exsertus.*

† *Stamina ordinis tertii sola perfecta.*

15. Eusideroxylon. Antheræ vertice subæqualiter 4-locellatæ.—*Borneo.*

†† *Stamina perfecta 9.*

16. Cinnamomum.—Flores hermaphroditi v. abortu polygami. Staminodia ordinis quarti capitata, stipitata v. subsessilia. Perianthii fructiferi segmenta a medio v. a basi decidua, tubo explanato sub fructu parum aucto. Folia sæpius 3-nervia.—*Asia trop. et subtrop., Australia trop., alibi inquilina.*

17. Machilus. Flores *Cinnamomi*. Perianthii fructiferi segmenta persistentia, reflexa.—*Asia trop. et or.*

18. Persea. Flores *Cinnamomi*. Perianthium totum sub fructu persistens appressum v. subpatens, v. a basi deciduum.—*Asia trop. et subtrop., ins. Canar., Amer. trop. et temp.*

19. Ocotea. Flores sæpius dioici. Staminodia ordinis quarti parva, oblonga setacea v. subclavata v. sæpius 0. Antheræ basi contractæ, locellis per paria superpositis. Perianthii fructiferi tubus auctus truncatus cupulatus concavus v. rarius disciformis.—*Amer. trop. et subtrop., ins. Canar., Afr. austr., ins. Mascar.*

20? Dictyphyllium. Flores dioici, ♂ ignoti. Perianthium fl. ♀ cum staminodiis post anthesin auctum rotato-patens sub fructu persistens.—*Brasilia.*

21. Nectandra. Flores hermaphroditi v. rarius polygamo-dioici. Staminodia *Ocoteæ* v. 0. Antheræ exteriores breves latæ subsessiles, locellis in arcum seu fere in lineam transversam dispositis. Perianthii fructiferi tubus auctus truncatus sæpius cupulatus.—*Amer. trop.*

22. Pleurothyrium. Flores hermaphroditi. Staminodia ordinis quarti capitato-cordata. Antheræ exteriores subsessiles, breves, latæ, disco carnoso in lobos seu dentes 6 staminibus alternos diviso cinctæ. Fructus ignotus.—*Peruvia et Columbia.*

23. SYNANDRODAPHNE. Flores hermaphroditi. Staminodia ordinis quarti brevia. Antheræ exteriores disco annulari elevato insidentes, cæterum subsessiles, dorso basi utrinque squamella parva auctæ. Fructus ignotus.—*Nov. Granat.*

Tribus II. Litseaceæ. Arbores fruticesve foliati. Staminum omnium antheræ introrsum locellatæ valvis sursum dehiscentibus. Folia perennantia v. in speciebus haud paucis annua. Stamina perfecta interdum ut in *Perseaceis* 6 v. 9, interdum vero etiam quarti ordinis perfecta v. additis nonnullis interioribus (rarius exterioribus?) plus quam 12, ordinis primi et secundi sæpius eglandulosa, interiora plerumque 2-glandulosa. Inflorescentia sæpius (excepto *Sassafridio*) brevis, densa, subsessilis v. breviter pedunculata.

Excepta: Antheræ ordinis quarti extrorsum ut in *Perseaceis* versæ in *Umbellularia*, sed flores ut in *Litsea* involucrati.

* *Inflorescentia laxa v. imbricato-bracteata.*

24. SASSAFRIDIUM. Flores hermaphroditi. Stamina perfecta 9, antheris 4-locellatis. Staminodia ordinis quarti capitato-cordata. Inflorescentia laxe paniculata. Habitus *Ocoteæ*.—*Amer. trop.*

25. SASSAFRAS. Flores dioici. Stamina perfecta 9, antheris 4-locellatis; staminodia 0. Racemi laxi, breves ad basin innovationum.—*Amer. bor.*

26. ACTINODAPHNE. Flores dioici. Stamina perfecta 9, antheris 4-locellatis; staminodia 0. Flores sessiles, dense fasciculati v. brevissime racemosi.—*Ind. or.*, *Archip. Malay.*, *China*, *Japonia.*

** *Flores umbellati capitati v. rarius solitarii, umbellis capitulisve ante anthesin involucro 4–6-bracteato inclusis.*

† *Antheræ 4-locellatæ.*

27. DODECADENIA. Flores hermaphroditi, in involucro sessili solitarii. Stamina 12–∞.—*Ind. or.*

28. LITSEA. Flores dioici, in involucro 4–6 rarius ∞ rarissime 2. Stamina in flore 3-mero 9, 12 v. ∞, in flore dimero 6.—*Asia trop. et or.*, *Australia*, *alibi inquilina.*

29. UMBELLULARIA. Omnia *Litseæ* nisi antheræ ordinis quarti extrorsum spectantes.—*California.*

†† *Antheræ 2-locellatæ.*

30. ITEADAPHNE. Flores sæpius unisexuales, in involucro minuto solitarii. Stamina 6, rarius 7–9.—*Asia trop.*

31. LINDERA. Flores dioici, in involucro 4–6 rarius ∞. Stamina sæpius 9.—*Asia trop. et or.*

32. LAURUS. Flores polygami, in involucro sæpius 4. Perianthii segmenta 4. Stamina 12–20 rarissime pauciora.—*Reg. Mediter.*, *ins. Canar.*

Tribus III. Cassytheæ. Caules volubiles, filiformes, aphylli. Cætera *Perseacearum*.

33. CASSYTHA. Flores et fructus *Cryptocaryæ*.—*Amer.*, *Asia et Afr. trop.*, *Australia.*

Tribus IV. Hernandieæ. Arbores foliati. Antheræ 2-locellatæ, valvis lateraliter dehiscentibus v. cito deciduis. Ovarium inferum.

34. HERNANDIA. Flores monoici, in involucro 3, centralis ♀ involucello basi cinctus, laterales ♂ nudi. Fructus involucello valde aucto inclusus.—*Utriusque orbis reg. trop.*

GENERA AFFINIA AUT DUBIA V. EXCLUSA.

GYROCARPEÆ, seu ILLIGERA, Blume, GYROCARPUS, Jacq., et SPARATTANTHELIUM, Mart., ob antheras valvulis more *Laurinearum* dehiscentibus, ab auctoribus pluribus pro subordine harum recensitæ, a nobis supra, i. 689 ad *Combretaceas* referentur. Genera nonnulla *Monimiacearum* etiam antheris *Laurinearum* gaudent.

GOMORTEGA, Ruiz et Pav. Fl. Per. et Chil. Prod. 62, t. 10; Syst. Veg. 108, Ic. ined. t. 397 (ADENOSTEMUM, Pers. Syn. i. 467, C. Gay. Fl. Chil. v. 302, t. 60) est genus adhuc valde dubium et varie descriptum. Arbor dicitur foliis oppositis quæ tamen latiora et inflorescentia laxior in Fl. Per. et Chil. depicta quam in Gay. Fl. Chil. Antheræ 2-locellatæ, valvis more *Laurinearum*

ascendentibus, sed de numero et situ uti de numero partium perianthii auctores longe differunt. Ovarium vario descriptum superum v. inferum; stylus ex Ruiz et Pav. breviter filiformis, ramis 2 v. 3 breviter filiformibus. Fructum a Leyboldio accepimus, evidenter idem ac a Ruiz et Pav. depictus et a Philippi in litt. ad DC. (Prod. xv. i. 507) descriptus; drupa est ovoideo-globosa evidenter e carpellis 3 arcte conferruminatis composita; exocarpium carnosum, crassiusculum; endocarpium crassum, lignosum, durissimum, 3-loculare, loculo uno tantum fertile. Semen ovatum, plano-compressum, testa crassiuscula fere cartilaginea, albumine copioso; embryo plano-compressus, albumine duplo saltem brevior, radicula supera lata obtusa cum cotyledonibus obovato-orbiculatis planis continua. Floribus igitur stirpis alienæ descriptis, fructu nequaquam *Laurineis* conveniente forte ad **Euphorbiaceam** quamdam pertinente, genus a *Laurineis* expellendum nisi omnino delendum.

PEUMUS, Molina, Hist. Nat. Chile, ed. angl. i. 288, est genus falsum, e confusione stirpium ad genera diversa pertinentium fictum. Character floris nulli nisi *Laureliæ* convenit, cætera ad species *Cryptocaryæ*, *Peumi*, Pers., etc, referenda videntur.

KEULIA, Molina, a Neesio sub *Adenostemate* citatur, sed nullum genus hoc nomine signatum in opere Moliniano invenimus.

NYROPHYLLA et ADAPHUS, Neck. Elem. ii. 240. genera ad species *Lauri*, Linn., proposita, ex charactere dato nequaquam recognoscenda sunt.

CHRISTMANNIA, Dennst. Schl. Hort. Malab. 30, genus ad *Courondi*, Rheede, Hort. Malab. iv. 103, t. 50, propositum, a Rosenthal, Syn. Pl. Diaphor. 1066 ad *Laurineas* refertur. Icon citata *Salaciæ* convenit inter **Celastrineas**, stamina tamen numerosa dicuntur. Genus igitur incertum delendum est.

LICARIA, Aubl. Pl. Gui. 313, t. 121, e Guiana, floribus fructibusque ignotis, DENDRODAPHNE, Beurl. in R. Vetensk. Akad. Stockh. Handl. 1854, 145, floribus fructibusque indescriptis, et CHIRACA, Bert. in Rosenth. Syn. Pl. Diaphor. 238, ubi nomen tantum, genera remanent indefinita et nomina delenda.

INOCARPUS, Forst., olim *Hernandiaceis* adscriptus, est **Leguminosa**, supra i. 552.

SARCOSTIGMA, Wight et Arn., inter **Olacineas** (*Phytocreneas*) recensetur, supra, i. 351.

TRIBUS I. PERSEACEÆ.

1. **Cryptocarya**, *R. Br. Prod. Fl. N. Holl.* 402.—Flores hermaphroditi. Perianthii tubus turbinatus v. ovoideus, post anthesin apice constrictus, limbi segmenta 6, subæqualia. Stamina perfecta 9, ordinis primi et secundi eglandulosa, antheris introrsum 2-locellatis, ordinis tertii basi utrinque glandula subsessili aucta, antheris extrorsum 2-locellatis; staminodia ordinis quarti ovata, breviter stipitata, v. a basi angusta. Ovarium in fundo perianthii sessile, tubo inclusum; stylus breviter exsertus, stigmate obtuso v. discoideo. Fructus tubo perianthii aucto indurato v. tenuiter subdrupaceo v. carnosulo, globoso v. oblongo, lævi v. ∞-costato inclusum, ore clauso, limbo deciduo v. rarius diu persistente; pericarpium membranaceum v. induratum, tubo perianthii accretum adnatum v. sæpius liberum v. facile solubile. Seminis testa membranacea, a pericarpio sæpe vix distinguenda.—Arbores fruticesve. Folia alterna v. sparsa, rarius subopposita, coriacea, pennivenia v. triplinervia. Flores parvi, in paniculas axillares v. subterminales pedunculatas dispositi.

Species ad 40, Asiæ tropicæ, Australiæ, Austro-Caledoniæ, ins. Sandwicensium, Africæ australis et Americæ australis tropicæ et extratropicæ incolæ. *Meisn. in DC. Prod.* xv. i. 68, *et in Mart. Fl. Bras.* v. ii. 164, *t.* 56. *Benth. Fl. Austral.* v. 295. *Hook. Journ. Bot.* iv. *t.* 23 (*Laurus*). *Wight, Ic. t.* 1829, 1830. *Bedd. Fl. Sylv. t.* 299. *Ruiz et Pav. Fl. Per. et Chil. Ic. ined. t.* 358a (*Laurus*). CARYODAPHNE, *Nees, Syst. Laur.* 225. *Meisn. in DC. Prod.* xv. i. 77.

Genus characteribus floralibus et fructu intra perianthium incluso quasi infero constans, variat pericarpii indole, vix tamen in genera v. sectiones distinctas dividendum. In plerisque speciebus embryo maturus intra tegmen duplex continetur, exterius (tubus perianthii) nunc tenuiter carnosum, nunc induratum siccum v. extus carnosulum, interius (pericarpium) membranaceum, liberum v exteriori leviter adhærens sed aqua calida solubile; testa in his cum pericarpio omnino confluens v. evanida; in aliis speciebus pericarpium cum tubo perianthii concretum, testa membranacea a pericarpio distincta v. interdum evanida. In *C. Wightiana*, Thw., testam membranaceam vidimus inter cotyledones more *Beilschmiediæ fagifoliæ* intrusam. In *C. Griffithiana*, Wight, pericarpium cum

tubo perianthii intus induratum in fundo loculi intrusum et lacunosum locellos spurios vacuos formans, sed forte fructus examinati casu abnormes erant. In *C. Peumo*, Nees, ex Chile, et *C. angustifolia*, E. Mey., ex Africa australi, perianthii tubus fructifer oblongus, tenuiter carnosus, sicco fragilis, pericarpio membranaceo distincto; hæ species tamen a genere nequaquam separandæ videntur.

Bellota, *C. Gay, Fl. Chil.* v. 297, *t.* 59 (Boldu, *Nees, Syst. Laur.* 177; *Meissn. in DC. Prod.* xv. i. 67), species unica Chilensis, flores ostendit omnino *Cryptocaryæ*. Folia pleraque opposita et insigniter venosa. Fructus nec a C. Gayo nec a Meissnero visus, a Neesio ad specimen Pœppigianum cum fructu semiadulto descriptus, bacca dicitur perianthio persistente non mutato nonnihil rigescente basi cincta, sed verisimiliter ad stirpem alienam pertinuit. Fructus enim in Museo Kewiano a Leiboldio acceptus est omnino normæ *Cryptocaryæ* conforme, ovoideo-subglobosus, pollicem longus, perianthii tubo cum pericarpio concreto duro extus lævi, ore perfecte clauso. Baillon, Hist. Pl. ii. 435, *C. Peumo* cum *Bellota* ad genus *Boldu* refert, et fructum prioris describit. Boldu, Feuill. Hist. Pl. Medic. ii. 11, t. 6, a Neesio infeliciter ad *Bellotam* refertur. *Boldu* apud Chilenses hodiernos imprimis *Peumum*, Pers., ex ordine *Monimiacearum* designat, et verisimiliter nomen vulgo arboribus variis tam *Laurinearum* quam *Monimiacearum* adhibetur. Icon Feuillæi inflorescentiam ostendit potius *Peumi* quam *Bellotæ*, character floris nulli convenit nisi *Laureliæ*, R. et Pav. Fructus olivæformis imprimis in *Cryptocarya Peumo* observatur.

2. **Ravensara,** *Sonner. Voy. Ind. Or.* iii. 248, *t.* 127. (Agathophyllum, *Juss. Gen.* 431. Evodia, *Gærtn. Fruct.* ii. 100, *t.* 103, *non Forst.*)—Flores hermaphroditi (v. polygami ?). Perianthii tubus turbinatus v. obovoideus, post anthesin apice constrictus; limbi segmenta 6, subæqualia. Stamina perfecta 9, ordinis primi et secundi eglandulosa, antheris introrsum 2-locellatis, ordinis tertii basi utrinque glandula subsessili aucta, antheris extrorsum 2-locellatis; staminodia ordinis quarti ovata, breviter stipitata (v. interdum deficientia ?). Ovarium in fundo perianthii sessile, tubo inclusum; stylus breviter exsertus. Fructus tubo perianthio aucto globoso carnoso-oleoso v. intus indurato inclusus, ore subclauso, limbo deciduo; pericarpium cum tubo perianthii confluens, intus a basi ultra medium costis 6 intrusis in centro connatis in loculos 6 plus minus perfectos divisum. Semen ex apice indiviso pendulum, in lobos 6 in loculos spurios descendentes divisum, testa membranacea a pericarpio libera v. demum plus minus adnata.—Arbores glabræ, valde aromaticæ. Folia sparsa, coriacea, penninervia. Paniculæ paucifloræ, in axillis superioribus pedunculatæ. Flores parvi.

Species 3 v. 4 Madagascarienses. *Baill. Adans.* ix. 299. *Meissn. in DC. Prod.* xv. i. 109 (*Agathophyllum*). *Lam. Illustr. t.* 404 (*Evodia*) *et* 825 (*Agathophyllum*). Character supra datus ex *R. aromatica*, Sonn., sumptus, quæ sola nobis nota.

3. **Cyanodaphne,** *Blume, Mus. Bot. Lugd. Bat.* i. 333.—Flores hermaphroditi. Perianthii tubus campanulatus; limbi segmenta 6, 3 exteriora multo minora. Stamina perfecta 9, ordinis primi et secundi eglandulosa, antheris introrsum 2-locellatis, ordinis tertii basi utrinque glandula subsessili aucta, antheris extrorsum 2-locellatis; staminodia quarti ordinis parva, ovata. Ovarium in fundo perianthii subsessile, tubo inclusum, stylo breviter exserto. Fructus, a nobis non visus, perianthii tubo baccato limbo persistente coronato inclusus.—Arbores. Folia sparsa, in ramulis novellis brevibus conferta. Gemmæ paucisquamatæ. Paniculæ ad basin innovationum pedunculatæ, floribus parvis numerosis.

Species 2, Archipelagi Malayani incolæ. *Meissn. in DC. Prod.* xv. i. 76. *Blume, Rumphia* i. *t.* 46 (*Dehaasia*).

4 ? **Icosandra,** *Philippi in Linnæa* xxix. 39.—Flores hermaphroditi. Perianthii tubus (ovoideus ?); limbi segmenta 10, subæqualia. Stamina perfecta 15, omnia eglandulosa, filamentis brevissimis; antheræ ordinis primi et secundi introrsum, ordinis tertii extrorsum 2-locellatæ; staminodia ordinis quarti oblongo-filiformia. Ovarium tubo perianthii immersum. Fructus . . . .—Arbor elegans. Folia subopposita, valde coriacea, penninervia. Paniculæ foliatæ, folia bis v. ter æquantes. (*Char. ex Philippi.*)

Species 1, Chilensis, a nobis non visa. *Meissn. in DC. Prod.* xv. i. 506.

5. **Apollonias,** *Nees, Laur. Expos.* 10; *Syst. Laur.* 95.—Flores hermaphroditi. Perianthii tubus brevis; limbi segmenta 6, subæqualia. Stamina perfecta 9, filamentis filiformibus, ordinis primi et secundi eglandulosa, antheris introrsum 2-locellatis, ordinis tertii basi utrinque glandula sessili v. breviter stipitata aucta, antheris extrorsum 2-locellatis; staminodia ordinis quarti ovoidea v. cordata, brevissimo stipitata. Ovarium haud immersum, in stylum attenuatum. Bacca globosa v. ovoidea, basi perianthio parum aucto indurato 6-fido stipata.—Arborea. Folia sparsa, penninervia, coriacea. Paniculæ axillares et subterminales, nunc breves densæ brevissime pedunculatæ, nunc laxiores pauciflore v. longius pedunculatæ, folia rarius superantes. Flores parvuli.

Species 2, altera Canariensis, altera Zeylanica. *Meisn. in DC. Prod.* xv. i. 64. *Webb. Phytogr. Canar. t.* 203 (*Phœbe*). *Wight, Ic. t.* 1819. *Bedd. Fl. Sylv. t.* 291. Genus pluribus notis *Perseæ* sect. *Phœbe* valde affine, differt antheris 2 nec 4-locellatis.

6. **Beilschmiedia,** *Nees in Wall. Pl. As. Rar.* ii. 69; *Syst. Laur.* 197.—Flores hermaphroditi. Perianthii tubus brevis nunc brevissimus; limbi segmenta 6, subæqualia. Stamina perfecta 9, ordinis primi et secundi eglandulosa, antheris introrsum 2-locellatis, ordinis tertii antheris extrorsum 2-locellatis, glandulis baseos ad utrumque latus sæpe stipitatis et interdum inter filamenta tertii v. secundi ordinis irregulariter interpositis; staminodia ordinis quarti ovoidea v. cordata, brevissimo stipitata. Ovarium sessile nec immersum, in stylum attenuatum. Bacca oblonga ovoidea v. globosa, pedicello haud v. parum incrassato insidens, basi nuda, perianthio toto deciduo.—Arbores fruticesve. Folia sparsa, sæpe subopposita, coriacea, penninervia. Flores parvi, paniculis axillaribus nunc densis fasciculiformibus sessilibus nunc laxis pedunculatis; inflorescentia junior in speciebus paucis squamis imbricatis caducissimis obtecta.

Species ad 20, Africæ et Asiæ tropicæ, Australiæ, Novæ Zelandiæ et Americæ tropicæ incolæ.

Genus *Dehaasia* valde affine nec differt nisi staminodiis ordinis quarti evolutis et pedicello fructifero minus incrassato, in sectiones 3 potius patria quam characteribus distinctas dividitur:—

1. *Eubeilschmiedia.* Species Asiaticæ ad 10, foliis sæpe nec semper suboppositis, perianthii tubo brevissimo v. brevi; *Meisn. in DC. Prod.* xv. i. 63; *Kurz, For. Fl. Burm.* ii. 293; *Wight, Ic. t.* 1828; *Bedd. Fl. Sylv. t.* 263, inclusis etiam *Haasia Wightii*, Nees, Wight, Ic. t. 1831; Bedd. Fl. Sylv. t. 298, et *H. oppositifolia*, Meissn., staminodiis in utraque specie normalibus et pedicello fructifero parum incrassato. Genus a Neesio primo conditum fuit ad *Laurum bilocularem*, Roxb. (*B. Roxburghianam*, Nees, et *B. fagifoliam*, Nees), apud quas testa seminis pericarpio plus minus adhærens, inter cotyledones plica membranacea plus minus intrusa, baccam basi quasi in loculos 2 dividit, et auctor nomine Roxburghiano seductus ovarium dixit 2-loculare. Roxburgh tamen, uti bene monet Wight, antheras 2-loculares nec ovarium in mente habuit, et 'plica membranæ internæ inter cotyledones prominula quæ etiamsi in aliis quoque Laurinearum generibus observetur in isto tamen ante omnia in oculis cadit' (*Nees in Wall. l.c.*). Nos hanc plicam nec in omnibus *Beilschmiediis* veris nec constanter in *B. Roxburghii* invenimus.

2. *Nesodaphne.* Species 3, quarum 2 Novozelandicæ inter se dissimiles, una *Beilschmiediis* typicis panicula bracteata cæterisque characteribus arcte affinis, altera, cum specie tertia Australiensi, a *Hufelandiis* Americanis nec charactere nec habitu separanda.—NESODAPHNE, *Hook. f. Fl. N. Zel.* i. 217. *Meisn. in DC. Prod.* xv. i. 66. *Benth. Fl. Austral.* v. 299.

3. *Hufelandia.* Species 7 Americanæ et Africanæ tropicæ, foliis alternis paniculis laxis ebracteatis, perianthii tubo in aliis minus abbreviato quam in *B. fagifolia*, in aliis tamen nonnullis, Asiaticis simillimo. HUFELANDIA, *Nees in Laur. Expos.* (Vratislaviæ, 1833) 21 *cum tabb.* 2, *Meisn. in DC. Prod.* xv. i. 65. Hic auctor species 2 sub *H. pendula* confudi videtur: (1) *Laurus pendula*, Sw., pedicello fructifero recurvo (Jamaica, *M'Fadyen*, Orizaba, *F. Mueller*), et (2) *H. Thomæa*, Nees, pedicello fructuque erectis, in India occidentali vulgatior (Cuba, *Wright*, Jamaica, *Purdie*, etc.). Species Africanæ in Prodromo sub *Oreodaphne* recensitæ sunt.

7. **Dehaasia,** *Blume, Rumphia* i. 161, *t.* 44, 45, 47. (Haasia, *Nees, Syst. Laurin.* 372.)—Flores hermaphroditi. Perianthii tubus brevissimus; limbi segmenta 6, 3 exterioribus multo minoribus. Stamina perfecta 9, ordinis primæ et secundæ eglandulosa, antheris introrsum 2-locellatis, ordinis tertii basi utrinque glandula subsessili aucta, antheris extrorsum 2-locellatis; staminodia 0 (v. rarius pauca minuta?). Ovarium sessile, haud immersum, in stylum brevem attenuatum. Bacca oblonga, pedicello valde

incrassato carnoso colorato imposita, perianthio toto deciduo.—Arbores. Folia alterna, coriacea, pennivenia. Paniculæ axillares, sæpius longe pedunculatæ. Flores parvi.

Species ad 10, quarum tamen nonnullæ non satis notæ, Archipelagi Malayani incolæ. *Meissn. in DC. Prod.* xv. i. 60 (*Haasia*), exclusis tamen *H. pedunculari*, ob antheras 4-locellatas ad *Perseam*, et *H. Wightii* et *H. oppositifolia*, ob staminodia quarti ordinis evoluta et pedicellum fructiferum minus incrassatum ad *Beilschmiediam* referendis.

8. **Aydendron,** *Nees in Linnæa* viii. 36; *Syst. Laur.* 245.—Flores hermaphroditi v. polygamo-dioici. Perianthii tubus crassiusculus, campanulatus v. ovoideus, demum sæpe apice constrictus; limbi segmenta 6, subæqualia. Stamina perfecta 9, filamentis latis v. angustis, ordinis primi et secundi eglandulosa, antheris introrsum 2-locellatis, ordinis tertii basi utrinque glandula subsessili aucta, antheris juxta apicem extrorsum 2-locellatis; staminodia ordinis quarti pauca parva v. 0, rarius magis evoluta capitato-cordata. Ovarium perianthii tubo inclusum, stylo breviter exserto. Bacca primum perianthii tubo subgloboso inclusa, mox exserta, matura globosa ovoidea v. oblonga, perianthii tubo aucto indurato cupulato truncato margine simplici v. duplici basi cincta, limbo deciduo.—Arbores. Folia sparsa, coriacea, pennivenia. Paniculæ pedunculatæ, axillares v. subterminales, longæ laxæque v. folio breviores. Flores parvi, glabri v. tomentosi.

Species ad 45, Americæ tropicæ incolæ. *Meissn. in DC. Prod.* xv. i. 88 *et* 172, *et in Mart. Fl. Bras.* v. ii. 176 *et* 282, *t.* 62 *ad* 66, 103, 104 (*Aydendron et Goeppertia*). *Ruiz et Pav. Fl. Per. et Chil. Ic. ined. t.* 355 (*et* 360?) (*Laurus*).

Genus ab *Ocotea* differt antheris 2-locellatis, et pariter variat floribus hermaphroditis v. abortu unisexualibus et fructu juniore plus minus e cupula exserto. Goeppertia, *Nees, Syst. Laur.* 365 (Endlicheria, *Nees in Linnæa* viii. 37, vel Schauera *ejusd. in Lindl. Introd. Nat. Syst. ed.* 2, 202 *in adnot.*) a Grisebachio ad *Aydendron* reducta, iterum a Meissnero separata pro speciebus evidentius dioicis, fructu vel ignoto v. in speciebus a nobis visis eodem ac in *Aydendro*. Character sexualis forte sectiones duas distinguit sed species aliter quam in Prodromo distribuendæ, nam, e.g., *Goeppertia argentea*, Meissn., evidenter eadem est ac *Aydendron verticillatum*, Meissn., et *Goeppertia polyantha*, Meissn., quam maxime affinis est *Aydendro ripario*, Nees.

Goeppertia caudata, Meissn. (Spruce, n. 2638), videtur potius *Ocoteæ* (*Oreodaphnis*) species. Flores in speciminibus abortu subfœmineæ antheris longiuscule stipitatis effœtis v. obscure 4-locellatis.

Aydendron tenellum et *A. goyazana*, Meissn., staminodiis ordinis tertii longis angustis haud locellatis et perianthio fructifero parum aucto cum pedicello incrassato continuo, ad *Aioueam* referenda.

Aydendron floribundum, Meissn., quoad flores generi conforme nisi perianthii tubo longiore angustioreque, a cæteris speciebus valde diversum fructu (a nobis non viso sed a Meissnero in Fl. Bras. t. 62 et 105 depicto) magno, perianthii tubo cum pericarpio concreto crasso carnoso apice supra semen clauso, et species forte ad *Cryptocaryam* referenda est.

9. **Ampelodaphne,** *Meissn. in DC. Prod.* xv. i. 81, *et in Mart. Fl. Bras.* v. ii. 167, *t.* 57.—Flores dioici. Perianthii tubus in fl. ♂ brevis, in fl. ♀ ovoideus v. abbreviatus, ad faucem constrictus; limbi segmenta 6, subæqualia. Stamina in fl. ♂ perfecta 9, ordinis primi et secundi eglandulosa, antheris introrsum 2-locellatis, ordinis tertii basi utrinque glandula sessili aucta, antheris extrorsum 2-locellatis; staminodia 0. Ovarium abortivum. Staminodia in fl. ♀ 6 v. 9 brevia, sessilia, squamæformia. Ovarium tubo perianthii inclusum, stylo breviter exserto. Bacca junior perianthii tubo aucto inclusa, demum exserta, basi perianthii tubo aucto cupuliformi truncato vix indurato cincta.—Arbores fruticesve. Folia sparsa v. in ramulis novellis conferta, coriacea, pennivenia. Flores parvi, subsessiles, ♂ numerosi laxe et ample paniculati, ♀ in paniculas densas fere spiciformes breves v. longiores interruptasque conferti. Paniculæ utriusque sexus laterales v. ad basin innovationum axillares. Flores sæpe tomentosi v. hirsuti, nunc tamen glabri.

Species nobis notæ 5, Brasilianæ et Guianenses. Genus ab *Aydendro* differt habitu, inflorescentia, et floribus strictius dioicis.

10. **Aiouea,** *Aubl. Pl. Gui.* i. 310, *t.* 120. (Douglassia, *Schreb. Gen. Pl.* 809. Colomandra, *Neck. Elem.* ii. 142. Ehrardia, *Scop. fide Nees.*)—Flores hermaphroditi. Perianthii

tubus ovoideus v. subcampanulatus; limbi segmenta 6, subæqualia. Stamina perfecta 6, ordinis primi et secundi, rarius 3 tantum ordinis primi, filamentis brevibus v. longiusculis eglandulosis, antheris introrsum 2-locellatis; staminodia ordinis tertii angusta, basi utrinque glandula magna aucta, apicem versus rarius imperfecte 1-2-locellata, ordinis quarti ovato-triangularia subsessilia v. rarius 0. Ovarium perianthii tubo inclusum, stylo plus minus exserto. Bacca ovoidea v. oblonga, pedicello incrassato sæpius obconico perianthii reliquiis induratis coronato imposita.—Arbores v. frutices glaberrimi, sæpius nitidi. Folia sparsa, coriacea, pennivenia. Paniculæ axillares subterminalesque, laxæ. Flores sæpius minimæ numerosæque.

Species ad 8, inclusis nonnullis adhuc indescriptis, Brasiliæ, Guianæ et Indiæ occidentalis incolæ. *Meissn. in DC. Prod.* xv. i. 82, *et in Mart. Fl. Bras.* v. ii. 169, *t.* 58.

Specimina Spruceana n. 2415 (v. 2414) a Meissnero ad varietatem *A. brasiliensis* relata, differunt foliis longe et anguste acuminatis et staminibus ordinis secundi ad staminodia brevia fere setacea reductis.

11? **Potameia**, *Thou. Nov. Gen. Madag.* 5.—Flores hermaphroditi. Perianthii tubus obconicus; limbi segmenta 4, subæqualia. Stamina perfecta 4, eglandulosa, filamentis brevibus latis; antheræ introrsum 2-locellatæ. Staminodia ordinis tertii angusta, utrinque basi glandula aucta, ordinis quarti minima v. 0. Ovarium haud immersum, stylo brevi. Bacca perianthio parum aucto segmentis reflexis insidens.—Frutex expansus ramis erectis. Folia alterna. Paniculæ axillares, ramosissimæ. Flores parvi, numerosi. (*Char. ex Thou. et Baill.*)

Species 1, Madagascariensis, a nobis non visa, *Baill. Adans.* ix. 241.

Thouars l. c. radiculam dixit inferam, et verisimiliter hujus causæ auctores recentiores genus ad *Proteaceas* retulerunt. Baillon tamen ex autopsia specimen ad *Laurineas* restoravit, de radicula et micropylis situ tamen silet.

12. **Endiandra**, *R. Br. Prod. Fl. Nov. Holl.* 402. (Dictyodaphne, *Blume, Mus. Bot. Lugd. Bat.* i. 270.)—Flores hermaphroditi. Perianthii tubus brevissimus subnullus v. campanulatus; segmenta 6, subæqualia v. exteriora paullo majora. Stamina perfecta 3, ordinis tertii, antheris crassiusculis sessilibus medio v. sub apice extrorsum 2-locellatis; staminodia 0 nisi rarius 3 parva ordinis quarti v. annulus carnosus ad basin segmentorum loco ordinum primi et secundi; glandulæ 6 ad basin staminum perfectorum v. 0. Ovarium sessile, acutum, stigmate parvo sessili, v. in stylum brevem contractum. Bacca oblonga v. subglobosa, pedicello vix v. haud incrassato insidens, perianthio toto deciduo v. rarius disciformi v. immutato subpersistente.—Arbores. Folia alterna pennivenia sæpiusque copiose minuteque reticulata. Paniculæ axillares v. ad basin innovationum pedunculatæ floribundæ v. fere ad cymam unicam reductæ. Flores parvi.

Species gerontogeæ descriptæ 15, Indiæ orientalis, ins. Fiji, Archipelagi Malayani et Australiæ incolæ, nonnullæ tamen e Malayanis adhuc valde dubiæ. *Meissn. in DC. Prod.* xv. i. 78, 79 (*Endiandra et Dictyodaphne*). *Benth. Fl. Austral.* v. 300. His tamen addendæ 2 Brasilianæ, *E. nævalium*, Benth. (SILVIA, *Allem. Diss. Rio Janeiro* 1845? *cum ic.*, *non R. et Pav. nec Benth.*; SILVIA, *Meissn. in DC. Prod.* xv. i. 84, *et in Mart. Fl. Bras.* v. ii. 171, *non Philippi*) et *E. Ita-uba*, Benth. (*Acrodiclidium Ita-uba*, Meissn. in DC. Prod. xv. i. 86, et in Mart. Fl. Bras. ii. 174, t. 60) qua, ex speciminibus Spruceanis, nec ovarium nec fructum *Acrodiclidii* invenimus. Analysis florum in tabula citata a flore alieno sumpta videtur.

13. **Acrodiclidium**, *Nees, Laur. Expos.* 13; *Syst. Laur.* 266.—Flores hermaphroditi. Perianthii tubus carnosus, ovoideus oblongus v. urceolatus, apice sæpe constrictus; limbi segmenta 6, subæqualia, vix patentia. Stamina perfecta 3, ordinis tertii, basi contracta et utrinque glandula sessile aucta, antheris summo vertice extrorsum v. subintrorsum 2-locellatis; staminodia ordinis primi et secundi sessilia, ovata v. minute squamiformia v. 0, ordinis 4 desunt. Ovarium perianthii tubo inclusum, stylo breviter exserto. Bacca primum perianthii tubo aucto globoso inclusa, deinum sæpius semi-exserta, perianthio aucto indurato cupulato margine simplici v. duplici cincta.—Arbores. Folia sparsa v.

subopposita, coriacea, pennivenia. Paniculæ axillares v. ad basin innovationum pedunculatæ, laxæ. Flores parvi, glabri v. tomentelli.

Species ad 12, Americæ tropicæ incolæ. *Meissn. in DC. Prod.* xv. i. 84, *et in Mart. Fl. Bras.* v. ii. 173, *t.* 59, 61 *excl. sp.*

In *A. jamaicensi*, Nees, staminodia omnino desunt; in *A. Camara*, Schomb., antheræ perfectæ apice latæ, locellis parvis in medio apicis contiguis potius introrsum quam extrorsum spectantibus et fructus subsiccus quam in cæteris major, sed species a genere non separanda; in *A. brasiliensi*, Nees, et *A. chrysophyllo*, Meissn., antheræ perfectæ summo vertice truncato nec introrsum nec extrorsum 2-locellatæ. *A. Gardneri*, Meissn., est *Aiouceæ* species, *A. Ita-uba*, Meissn., *Endiandræ*, *A. anacardioides*, Meissn., *Misantecæ* species.

14. **Misanteca,** *Cham. et Schl. in Linnæa* vi. 367. (Symphysodaphne, *A. Rich. Fl. Cub.* iii. 190, *t.* 67.)—Flores hermaphroditi. Perianthii tubus carnosus, ovoideus v. obovoideus; limbi segmenta 6, brevissima. Stamina perfecta 3, ordinis tertii, in columnam carnosam circa pistillum connata, e perianthio breviter exserta; singula apice extrorsum 2-locellata, additis interdum locellis 1–2 parvis inferioribus; staminodia ordinis primi et secundi brevia v. obsoleta, ordinis quarti desunt. Ovarium in stylum brevem contractum, columna staminea inclusum. Fructus a nobis non visus, in specie typica (ex auct.) perianthio tubo aucto indurato cupulato truncato insidens.—Arbores fruticesve. Folia sparsa, coriacea, pennivenia. Paniculæ ad basin innovationum pedunculatæ, cymulis in specie typica multifloris in capitula globosa sessilia confertis, in cæteris speciebus laxioribus paucifloris.

Species 4, typica Mexicana, *Meissn. in DC. Prod.* xv. i. 96, altera Cubensis, a nobis non visa, sed bene a Richardio l. c. depicta, *Meissn. l. c.* 175 (*Symphysodaphne*); 2 Brasilienses, *Benth. in Hook. Ic. Pl.* xiii. 46, *t.* 1259.

15. **Eusideroxylon,** *Teijsm. et Binnend. in Batav. Nat. Tijdschr.* xxv. (1863), 292 *cum tabb.* 2. (Bihania, *Meissn. in DC. Prod.* xv. i. 96.)—Flores hermaphroditi. Perianthii tubus brevis; limbi segmenta 6, subæqualia. Stamina perfecta 3, ordinis tertii, columnaria, eglandulosa, juxta apicem truncatam æqualiter 4-locellata, locellis 2 extrorsum 2 introrsum spectantibus; staminodia ordinis primi et secundi squamiformia, ovato-orbicularia, segmentis perianthii breviora, ordinis quarti angusta, staminibus breviora. Ovarium ovoideum, tubo perianthii vix inclusum, in stylum contractum. Fructus a nobis non visus, ex scheda Motleyana et ic. cit. magnitudine ovi cygnei, pedicello vix incrassato insidens, perianthio deciduo.—Arbor procera, ligno durissimo. Folia alterna, coriacea, pennivenia. Paniculæ axillares, fere a basi ramosæ, laxæ, pedicellis longiusculis. Flores parvi, tomentelli.

Species unica, Borneensis, *Motley*, *Beccari*, *n.* 2611.

16. **Cinnamomum,** *Blume, Bijdr.* 568.—Flores hermaphroditi v. abortu polygami. Perianthii tubus brevis, limbi segmenta 6, subæqualia. Stamina perfecta 9 v. abortu pauciora, ordinis primi et secundi eglandulosa, antheris introrsum 4-locellatis, ordinis tertii filamentis utrinque glandula subsessili v. stipitata auctis, antheris extrorsum 4- v. rarius 2-locellatis; staminodia ordinis quarti capitulo cordato v. sagittato breviter stipitato. Ovarium sessile, haud immersum, in stylum attenuatum; stigma discoideum v. obscure 3-lobum. Bacca perianthii tubo explanato parum v. vix aucto truncato v. 6-lobo insidens, segmentis a basi v. a medio deciduis v. rarius subpersistentibus.—Arbores fruticesve, cortice sæpius aromatico. Folia coriacea, opposita v. passim alterna, triplinervia v. rarius pennivenia. Flores in paniculas axillares subterminalesque v. ad basin innovationum laterales dispositi, ♀ sæpe majores quam ♂, interdum numero partium varie reducti.

Species enumeratæ ultra 50, plurimæ tamen ut jam monuerunt Thwaites, Meissner aliique reducendæ, et vix 10 servandæ videntur, Asiæ tropicæ et subtropicæ incolæ, ab Australia tropica usque ad Japoniam extensæ, quarum duæ in aliis regionibus calidis jam diu cultæ.—*Nees de Cinnam. Disput.* 1823, *t.* 1 *ad* 3 (*Laurus*). *Blume, Rumphia* i. 25, *t.* 9 *ad* 21. *Meissn. in DC. Prod.* xv. i. 10. *Miq. in Ann. Mus. Lugd. Bat.* i. 254. *Benth. Fl. Austral.* v. 303.

Species a Neesio, Syst. Laur. aliisque in genera duo distribuuntur quæ tamen Blume et Meissner ll. cc. pro sectionibus sequentibus *Cinnamomi* habent:—

1. *Malabathrum*, Meissn. Gemmæ nudæ v. obsolete squamatæ. Folia sæpius 3- v. tripli-nervia. Perianthii segmenta demum transversim secta, tubum fructiferum campanulatum v. expansum 6-dentatum relinquentia. CINNAMOMUM, *Nees, Syst. Laur.* 31. *Hook. Exot. Fl. t.* 176. *Wight, Ic. t.* 122 *ad* 131, 133 *ad* 141. *Bedd. Fl. Sylv. t.* 262. *Seem. Fl. Vit. t.* 48. *Hayne, Arzneigew.* xii. *t.* 20 *ad* 26. *Bentl. et Trim. Med. Pl. t.* 223, 224.

Nees quo duce Meissner genus *Cinnamomum* Burmanno (Thes. Zeyl. 62) tribuit, cum synonymo *Malabathrum*, Burm. Fl. Ind. 214. Genera tamen in Thesauro Zeylanico haud definiuntur et auctor sub *Cinnamomo* Laurineas plurimas includit quas postea in Fl. Ind. 91 ad *Laurum* retulit. De *Malabathro* in loco citato nil invenimus. Blume primum ut videtur genus distincte constituit.

2. *Camphora*, Meissn. Gemmæ imbricato-squamatæ. Folia penninervia v. plus minus distincte triplinervia. Perianthii segmenta a basi decidua, tubum fructiferum explanatum v. disciformem integerrimum truncatum relinquentia.—CAMPHORA, *Nees, Syst. Laur.* 87. *Wight, Ic. t.* 1818. *Hayne, Arzneigew.* xii. *t.* 27.

PARTHENOXYLON, *Blume, Mus. Bot. Lugd. Bat.* i. 322, est *Laurus Parthenoxylon*, Jack. in Mal. Misc. i. v. 28 (*Sassafras Parthenoxylon*, Nees; Wight, Ic. t. 1832), rite ab auctore a *Sassafras* separatur sed melius a Meissnero ad sectionem *Camphoram* refertur, nec longe a specie typica differt, nisi perianthii tubo fructifero plano nec concavo.

CECICODAPHNE, *Nees, Syst. Laur.* 202, species Silhetensis a nobis non visa, a Meissnero in DC. Prod. xv. i. 25 ad *Cinnamomi* sect. *Camphoram* refertur.

17. **Machilus,** *Nees in Wall. Pl. As. Rar.* ii. 70.—Flores hermaphroditi. Perianthii tubus brevis v. vix ullus; limbi segmenta 6, subæqualia v. exteriora paullo minora. Stamina perfecta 9, ordinis primi et secundi eglandulosa, filamentis longiusculis, antheris introrsum 4-locellatis, ordinis tertii basi utrinque glandula stipitata aucta, antheris extrorsum 4-locellatis; staminodia ordinis quarti capitulo cordato breviter stipitato. Ovarium sessile, in stylum attenuatum, stigmate parvo v. discoideo. Bacca globosa v. rarius oblonga, pedicello haud v. vix incrassato imposita, perianthii segmentis persistentibus sub bacca reflexis.—Arbores. Folia alterna, pennivenia. Gemmæ sæpius imbricato-squamatæ. Paniculæ axillares, nunc densæ subsessiles, nunc laxæ longe pedunculatæ. Flores parvi v. majusculi, glabri v. tomentosi.

Species ad 15, Indiæ orientalis, Archipelagi Malayani, et Asiæ orientalis usque ad Chinam et Japoniam incolæ.—*Meissn. in DC. Prod.* xv. i. 39. *Benth. Fl. Hongk.* 291. *Kurz, For. Fl. Burm.* ii. 291. *Wight, Ic. t.* 1824, 1825. *Bedd. Fl. Sylv. t.* 264.

18. **Persea,** *Gærtn. f. Fruct.* iii. 222, *t.* 221.—Flores hermaphroditi v. rarius abortu polygami. Perianthii tubus brevis; limbi segmenta 6 subæqualia v. 3 exteriora minora rarius minima. Stamina perfecta 9, ordinis primi et secundi eglandulosa, antheris introrsum 4-locellatis, ordinis tertii filamentis utrinque glandula subsessili auctis, antheris extrorsum 4-locellatis; staminodia ordinis quarti capitulo cordato v. sagittato breviter v. longiuscule stipitato. Ovarium sessile, in stylum attenuatum; stigma discoideum. Bacca perianthio toto persistente immutato v. vix aucto appresso v. patente basi stipata, v. perianthio toto deciduo denudata, pedicello fructifero tenui v. sæpius plus minus incrassato.—Arbores fruticesve. Folia alterna v. sparsa, coriacea, pennivenia v. plus minus distincte triplinervia. Flores in paniculas pedunculatas axillares subterminalesque v. ad basin innovationum laterales pauci- v. multi-floras dispositi. Gemmæ (an semper ?) esquamatæ.

Species enumeratæ ad 100, plurimæ tamen fructibus v. floribus ignotis valde dubiæ, Asiæ tropicæ et subtropicæ, Americæ tropicæ v. etiam extratropicæ a Chile usque ad Virginiam incolæ, cum specie unica Canariensi. *Meissn. in DC. Prod.* xv. i. 43, cum generibus cæteris infra citatis.

Genus quale a Neesio et Meissnero constitutum species includit perianthio persistente v. deciduo, segmentis æqualibus v. valde inæqualibus, pedicello fructifero incrassato v. vix mutato et his differentiis neglectis, genera *Alseodaphnem*, *Phœbem* et *Notaphœbem* charactere nullo distinguere possumus. Genus hic definitum *Cinnamomo* et *Machilo* valde affine, satis tamen differre videtur perianthio post

anthesin toto deciduo v. persistente vix mutato, nec transversim rupto nec reflexo et in sectiones sequentes facile dividitur:—

1. *Eupersea.* Perianthium (tomentosum) segmentis subæqualibus a fructu magno obovoideo crasso-carnoso deciduum.—Species unica (*P. gratissima*, Gærtn.), ex America tropica occidentali in terris tropicis late culta. *Sloane, Hist. Jam. t.* 222. *Wight, Ic. t.* 1823. *Bot. Reg. t.* 1258. *Bot. Mag. t.* 4580. *Ruiz et Pav. Fl. Chil. et Per. Ic. ined. t.* 345 (*Laurus*).

2. *Alseodaphne.* Perianthium (parvum, glabrum) segmentis subæqualibus a fructu globoso v. oblongo parvo v. mediocri deciduum.—Species enumeratæ 9, quarum 5 adhuc dubiæ, nunc floribus nunc fructubus ignotis, omnes Asiaticæ. ALSEODAPHNE, *Nees in Wall. Pl. As. Rar.* ii. 71. *Meissn. in DC. Prod.* xv. i. 27. *Benth. Fl. Hongk.* 292. *Wight, Ic. t.* 1826, 1827. *Bedd. Fl. Sylv. t.* 297.

3. *Gnesiopersea*, Nees. Perianthium (tomentosum v. rarius glabrum) segmentis subæqualibus, sub fructu persistens, sæpius patens.—Species ad 20, Americanæ cum una Canariensi. PERSEA sect. *Gnesiopersea, Meissn. in DC. Prod.* xv. i. 51 (excl. *P. gratissima*), *et in Mart. Fl. Bras.* v. ii. 157, *t.* 51 *ad* 55. *Webb, Phytogr. Canar. t.* 204. PHŒBE, *Nees, Syst. Laur.* 98, sect. *Cinnamomoideæ*, *Meissn. in DC. Prod.* xv. i. 29, *et in Mart. Fl. Bras.* v. ii. 149, *t.* 45. *Ruiz et Pav. Fl. Per. et Chil. Ic. ined. t.* 363, 364 (*Laurus*), vix tamen *L. sulcata.* Ruiz et Pav. ibid. t. 356, cujus flores ignoti.

4. *Phœbe.* Perianthium (glabrum v. tomentosum) segmentis subæqualibus, sub fructu persistens sæpius arcte appressum et interdum cartilagineo-costatum.—Species enumeratæ 26, Indiæ orientalis et Archipelagi Malayani incolæ. PHŒBE, *Nees, Syst. Laur.* sect. *Perseoideæ. Meissn. in DC. Prod.* xv. i. 33. *Wight, Ic. t.* 1820 *ad* 1822. *Bedd. Fl. Sylv. t.* 292.

5. *Eriodaphne.* Perianthium (sæpissime tomentosum), segmentis 3 exterioribus conspicue minoribus, sub fructu persistens.—Species ad 30, omnes Americanæ tropicæ v. subtropicæ a Chile usque ad Virginiam extensæ. PERSEÆ sect. *Eriodaphne, Meissn. in DC. Prod.* xv. i. 43, *et in Mart. Fl. Bras.* v. ii. 151, *t.* 46 *ad* 50. *Ruiz et Pav. Fl. Per. et Chil. Ic. ined. t.* 358, 369, 372 (*Laurus*).

6. *Notaphœbe.* Perianthium (parvum, nunc minimum, sæpius glabrum) segmentis 3 exterioribus conspicue minoribus nunc fere obsoletis, a fructu ut in *Alseodaphni* deciduum v. immutatum subpersistens.—Species enumeratæ 9, Archipelagi Malayani incolæ, cum una Assamica. NOTAPHŒBE, *Blume, Mus. Bot. Lugd. Bat.* i. 328. *Meissn. in DC. Prod.* xv. i. 58.

Phœbe insularis, Meissn. ex ins. Cocos (inter ins. Galapagos et Americam centralem, nec Ind. or.) cum speciebus 3 v. 4 ex America centrali et India occidentali adhuc ut videtur ineditis, floribus hermaphroditis cæteris characteribus plerisque *Perseæ*, differunt tamen et *Ocoteæ* accedunt staminodiorum quarti ordinis defectu. Perianthium fructiferum *P. insularis* omnino Perseæ, in cæteris speciebus ignotum.

MENESTRATA, *Vell. Fl. Flum.* 109; *Ic.* v. *t.* 2, est verisimiliter *Perseæ* species, imperfecte descripta.

19. **Ocotea,** *Aubl. Pl. Gui.* ii. 780, *t.* 310, *char. emend. in Juss. Gen.* 80. (Oreodaphne, *Nees in Linnæa* viii. 39.)—Flores polygamo-dioici v. rarius perfecte hermaphroditi. Perianthii tubus brevis v. campanulatus; limbi segmenta 6, subæqualia. Stamina perfecta 9, ordinis primi et secundi eglandulosa, antheris in filamentum brevissimum v. longius contractis introrsum 4-locellatis, locellis per paria superpositis; ordinis tertii filamentis sæpius longioribus utrinque basi glandula auctis, antheris extrorsum 4-locellatis; staminodia ordinis quarti minuta v. sæpius omnino nulla. Stamina in flore ♀ sæpius ad squamas anantheras v. obscure locellatas reducta. Ovarium tubo perianthii plus minus immersum, in stylum contractum, in flore ♂ angustum effœtum v. parvum v. rarius omnino nullum. Bacca globosa ovoidea v. oblonga, junior interdum perianthii tubo inclusa, matura exserta, perianthii tubo aucto indurato truncato cupuliformi v. expanso insidens v. basi arcte cincta, limbo deciduo.—Arbores v. rarius frutices. Folia alterna v. sparsa rarius subopposita, coriacea, pennivenia. Paniculæ axillares v. subterminales, pedunculatæ, sæpius laxæ v. cymulæ rarius fere in capitula contractæ v. panicula in fasciculum subsessilem contracta. Flores parvi, glabri v. rarius tomentelli.

Species ad 200, pro maxima parte Americæ tropicæ et subtropicæ incolæ, additis paucis ex ins. Canariensibus, Africa australi et ins. Mascarensibus. *Meissn. in DC. Prod.* xv. i. 97 *ad* 143, *et in Mart. Fl. Bras.* v. ii. 187 *ad* 250, *t.* 67 *ad* 89 (*Mespilodaphne, Oreodaphne, Strychnodaphne, Gymno-*

balanus et *Camphoromœa*, *excl. speciebus nonnullis*). *H. B. et K. Nov. Gen. et Sp. t.* 645 (*Cryptocarya*). *Webb. Phytogr. Canar. t.* 205 (*Oreodaphne*). *Bot. Mag. t.* 3931 (*Oreodaphne*). *Ruiz et Pav. Fl. Per. et Chil. Ic. ined. t.* 346, 353, 354, 357, 359, 365, 368 (*Laurus*, nonnullæ speciminibus fructiferis tantum depictis adhuc dubiæ).

Genus vastum, quoad flores sat constans, *Perseæ* affine, differt floribus sæpius (nec semper) abortu dioicis, staminodiis ordinis quarti raris minutis v. sæpius deficientibus, et perianthii tubo sub fructu aucto indurato truncato cupulato v. rarius ad discum cavum reducto, limbi segmentis sæpissime deciduis. A Neesio et Meissnero in genera plurima dividitur, imprimis ex fructus indole, quorum tria forte pro sectionibus retinenda etsi limitibus valde incertis separata: 1. *Mespilodaphne*, bacca juniore perianthii tubo subinclusa, demum exserta, basi v. ultra medium cupula indurata arcte cincta. 2. *Oreodaphne*, bacca adhuc paullo aucta jam cupulæ laxiori insidens. Et 3. *Strychnodaphne*, cupula ad discum cavum cum pedicello sæpius incrassato continuum reducta. Species tamen aliter quam in Prodromo distribuendæ, paucas fere æquo jure ad unam vel alteram sectionem referas, et, inter descriptas, ultra 100 fructu adhuc ignoto quoad sectionem dubiæ remanent.

Mespilodaphne, *Nees in Linnæa* viii. 45, genus imprimis ad *M. pretiosam*, Nees, constitutum, quod in sectionem supra definitam retinemus, cum plurimis aliis jam a Meissnero ab *Oreodaphne* translatis v. ab eo adhuc in *Oreodaphne* servatis, e.g. species typica generis, *O. guianensis*, Aubl., cum speciebus *Americanis* arcte affinibus, *O. glomerata*, *O. opifera*, *O. floribunda*, etc., cui bacca junior inclusa, semimatura exserta omnino *Mespilodaphnes*. In *O. bullata*, ex Africa australi et *O. fœtente*, ex ins. Canariensibus, bacca primum subinclusa, matura cupula majore arctius cincta quam in *Mespilodaphne cupulari*, Meisn. ex ins. Mascarensibus. *O. Schomburgkiana*, *O. venulosa*, aliæque plurimæ Americanæ pariter ad sect. *Mespilodaphnem* transferendæ.

Oreodaphne, *Nees in Linnæa* viii. 39, quoad characterem, includit sectiones nostras *Mespilodaphnem* et *Oreodaphnem* et nomen Aubletianum rejicit verisimiliter ob errorem Aubletii in fructus descriptione, emendatione Jussiæi neglecta. Meisner identitatem *Oreodaphnes* cum *Ocotea* recognovit, sed nescimus quare nomen Neesii Aubletiano Jussiæanoque anteposuit.

Teleiandra, *Nees in Linnæa* viii. 46; Petalanthera et Leptodaphne, *Nees, Laur. Expos.* 15, 16; et Evonymodaphne, *Nees, Syst. Laur.* 263, genera omnia ad species unicas proposita a Meissnero rite ad *Ocoteam* (*Oreodaphnem*) reducuntur. His addenda Nemodaphne, *Meisn. in DC. Prod.* xv. i. 109, species unica Cubensis nullo charactere generice separanda. Flores eidem; staminodia ordinis quarti minima linearia v. 0; fructus cupula majuscula, sed bacca ipsa in speciminibus monstruosa deformis.

Strychnodaphne, *Nees in Linnæa* viii. 39; Gymnobalanus, *Nees, l.c.* 38; et Camphoromœa, *Nees, Laur. Expos.* 16, genera a Meissnero servata, omnia tamen ad sectionem nostram tertiam *Ocoteæ* reducenda. Cupula in omnibus fere ad discum cavum reducta; pedicellus in *Strychnodaphni* et *Gymnobalano* crassus; perianthii lobi in priore diutius persistentes quam in *Gymnobalano*, sed in utraque sæpius demum decidui; in *Camphoromœa* pedicellus minus incrassatus, lobi sæpius diu persistentes. Inter species a Meissnero in *Oreodaphni* servatas, *O. commutata*, *O. leucoxylon* et *O. lucida* characteres omnino *Strychnodaphnes* ostendunt.

Oreodaphne fragrans, Meisn., e Jamaica, ex speciminibus ab auctoribus determinatis, est eadem ac *Nectandra staminea*, Griseb., a Meissnero Prod. xv. i. 176 ad *Synandrodaphnem* relata. Nobis videtur potius *Perseæ* species floribus hermaphroditis staminodiis ordinis quarti bene evolutis et inflorescentia *P. densifloræ*, Meisn. (ex Ic. Fl. Bras. t. 65). Fructus nobis ignotus et a Meissnero nonnisi statu monstruoso visus.

Oreodaphne effusa, Meisn., e Mexico, habitu et inflorescentia *Phœbi effusæ*, Meisn., simillima, flores eosdem ostendit nisi minores, staminodiis ordinis quarti bene evolutis. Fructus in utraque specie ignotus, sed melius sub *Persea* quam sub *Oreodaphni* militant.

Oreodaphne crassiramea, Meisn., ex speciminibus Burchellianis quam Pohlianis perfectioribus, characteres præbet *Misanteca*, staminibus ordinis tertii solis perfectis extrorsum 2-locellatis in columnam ovarium obtegentem connatis.

Oreodaphne Mannii, *O. minutiflora* et *O. gabooniensis*, Meisn., ex Africa tropica, antheris 2-locellatis cæterisque characteribus ad *Beilschmiediam* (*Hufelandiam*) pertinent.

Oreodaphne Kauaiensis, H. Mann in Mem. Bost. Soc. Nat. Hist. i. 536, ex ins. Sandwicensibus, ex specimine nostro fructifero est *Cryptocaryæ* species.

Mespilodaphne aurantiodora, Meisn., e Peruvia, cujus flores non nisi ex icone Ruiz et Pav. Fl. Per. et Chil. t. 349 noti sunt, nobis potius *Nectandræ* species videtur.

20? **Dicypellium**, *Nees, Laur. Expos.* 14; *Syst. Laur.* 343.—Flores dioici, ♂ ignoti. Fl. ♀: Perianthii segmenta 6, subæqualia, coriacea, rotata. Staminodia 12, ordinis primi petaliformia, persistentia, demum coriacea, ordinis secundi antheriformia, subspathulata, infra apicem inflexam obsolete 4-locellata; ordinis tertii minora, subtruncata; ordinis quarti squamiformia, oblonga, pistillo appressa. Stigma acutum. Bacca sicca, basi perianthio subcarnoso patente cum staminodiis grandifacto induratoque cincta, disco dilatato plano sexangulari imposita.—Arbor. Folia sparsa, chartaceo-coriacea, pennivenia. Racemi laterales, simplices. Flores majusculi. Bacca ovalis. (*Char. ex Meissn.*)

Species 1, Brasiliensis, a nobis non visa. *Meissn. in DC. Prod.* xv. i. 170, *et in Mart. Fl. Bras.* v. ii. 281, *t.* 102. Genus ut videtur *Nectandræ* affine, an forte stirps fœminea cujusdam speciei hujus generis?

21. **Nectandra**, *Roland. in Rottb. Descr. Pl. Surin.* 10. (Porostema, *Schreb. Gen. Pl.* 517, *ex parte.*)—Flores hermaphroditi v. rarius polygamo-dioici. Perianthii tubus brevis, sæpius latus; limbi segmenta 6, subæqualia. Stamina perfecta 9, ordinis primi et secundi eglandulosa, perianthio multo breviora, antheris latis subsessilibus introrsum 4-locellatis, locellis sub margine in arcum dispositis, ordinis tertii basi angustata et utrinque glandula subsessili aucta, antheris extrorsum 4-locellatis; staminodia ordinis quarti 0 v. parva setacea v. clavato-capitata. Ovarium in fundo perianthii tubo inclusum v. exsertum, stylo brevi. Bacca globosa ovoidea v. oblonga, perianthii tubo aucto indurato truncato cupulato v. expanso imposita v. basi cincta, junior rarius tubo subgloboso inclusa, limbo deciduo.—Arbores v. rarius frutices. Folia alterna sparsa v. rarius subopposita, coriacea, pennivenia, venis primariis sæpius nec semper magis prominulis quam in *Ocotea*. Paniculæ axillares v. terminales, pedunculatæ, cymulis sæpius laxis. Flores in speciebus typicis majores crassiores et magis patentes quam in *Ocotea*, in speciebus tamen nonnullis perianthium omnino *Ocoteæ*.

Species ad 70, Americæ tropicæ a Brasilia et Peruvia usque ad Mexicum et Indiam occidentalem et Americæ australis subtropicæ incolæ.—*Meissn. in DC. Prod.* xv. i. 146, *et in Mart. Fl. Bras.* v. ii. 250, *t.* 90 *ad* 101. *Miq. Stirp. Surin. t.* 58 *ad* 60. *Ruiz et Pav. Fl. Per. et Chil. Ic. ined. t.* 347 *ad* 349, 351, 361, 362, 366, 367, 370, *et* 371 (*Laurus*).

Genus ab auctoribus dividitur in sectiones duas: (1) *Pomatia*, floribus majoribus, perianthio fructifero sæpius cupulato, et (2) *Porostema*, floribus minoribus, perianthio fructifero minus aucto patentiore, sed distinctio valde incerta, et fructus plurium specierum ignotus. Schreber *Nectandram* cum *Ocotea* junxit sub nomine *Porostematis*.

22. **Pleurothyrium**, *Nees, Syst. Laur.* 349.—Flores hermaphroditi. Perianthii tubus brevis; limbi segmenta 6, subæqualia, patentia. Discus carnosus, ad basin limbi stamina cingens, in lobos seu dentes 6 staminibus alternos divisus. Stamina perfecta 9, antheris crassis filamento subæquilongis 4-locellatis, locellis 2 lateralibus 2 vix altius sitis, staminum ordinis primi et secundi introrsum ordinis tertii extrorsum spectantibus; glandulæ ad basin staminum ordinis tertii utrinque subsessiles; staminodia ordinis quarti triangularia v. cordata. Ovarium intra perianthii tubum sessile, stylo brevi. Fructus ignotus.—Arbores. Folia alterna, ampla, pennivenia, subtus ferruginea. Paniculæ amplæ, floribundæ, ferrugineæ, in axillis pedunculatæ.

Species Peruvianas v. Columbianas 8 enumerat *Meissn. in DC. Prod.* xv. i. 168. Inter has una tantum, *P. chrysophyllum*, Nees, nobis nota characteres genericos præbens. In *P. chrysothyrso*, *P. ferrugineo*, et *P. velutino*, Meissn., discus exterior deest et stamina ab iis speciei typicæ valde diversa. Prior ad *Nectandram* hæ duæ ad *Perseam* referendæ videntur. Fructus in omnibus ignotus.

23. **Synandrodaphne**, *Meissn. in DC. Prod.* xv. i. 176.—Flores hermaphroditi. Perianthii tubus turbinato-campanulatus; limbi segmenta 6, subæqualia, tubo breviora. Stamina perfecta 9, ordinis primi et secundi disco annulari prominenti affixa, dorso basi glandula parva squamiformi utrinque aucta, antheris latis subsessilibus introrsum 4-locellatis, ordinis tertii intra discum angustiora, basi utrinque glandula nunc parva v. fere obsoleta aucta, antheris extrorsum 4-locellatis; staminodia ordinis quarti brevia. Ovarium

in stylum brevem contractum. Fructus ignotus.—Arbor v. frutex pubescens. Folia alterna, penninervia, reticulata. Paniculæ axillares v. laterales, pedunculatæ, pauciflorae, pedicellis longiusculis. Flores mediocres.

Species unica (*S. laxa*, Meissn.), Novæ Granatæ incola. *S. antillana*, Meissn. (*Nectandra staminea*, Griseb.) certe excludenda est, cum characteribus genericis minime conveniens. Est eadem ac *Oreodaphne fragrans*, Meissn., quæ nobis, fructu ignoto, potius *Perseæ* quam *Ocoteæ* species videtur.

Tribus II. Litseaceæ.

24. **Sassafridium**, *Meissn. in DC. Prod.* xv. i. 171.—Flores hermaphroditi v. polygamo-dioici, paniculati. Perianthii tubus brevis; limbi segmenta 6, subæqualia. Stamina perfecta 9, ordinis primi et secundi eglandulosa, ordinis tertii basi utrinque glandula subsessili aucta; antheræ omnes subsessiles, introrsum 4-locellatæ; staminodia ordinis quarti subsessilia, crassa, capitato-cordata. Ovarium in stylum brevem v. longiusculum attenuatum. Bacca junior cupula truncata inclusa, matura ignota.—Arbores v. frutices. Folia coriacea, penninervia, glabra. Paniculæ pedunculatæ, axillares v. laterales, folia vix excedentes. Perianthia et stamina tomentella v. glabra.

Species 3? quarum 1 Americæ centralis et Indiæ occidentalis incola, *Meissn. l. c.*; 2, adhuc ineditæ, Brasilienses (*Glaziou*, n. 6714 floribus ☿, et n. 6017 floribus ♂) congeneres videntur. Habitus omnium idem ac specierum nonnullarum *Ocoteæ*, sed antheræ ordinis tertii certe introrsum nec extrorsum locellatæ, et genus *Perseaceas* cum *Litseaceas* arcte connectit.

25. **Sassafras**, *Nees, Laur. Expos.* 17; *Syst. Laur.* 487.—Flores dioici, breviter laxeque racemosi. Perianthii tubus brevissimus; limbi segmenta 6, subæqualia. Stamina in fl. ♂ et staminodia sæpius in fl. ♀ 9, ordinis primi et secundi eglandulosa, ordinis tertii basi utrinque glandula stipitata aucta; filamenta angusta; antheræ omnium introrsum 4-locellatæ. Ovarium e perianthii tubo emersum, stylo longiusculo. Bacca perianthii tubo aucto carnoso breviter cupulato truncato v. sinuato insidens.—Arbores. Folia alterna, membranacea, annua, penninervia. Racemi breves fere umbelliformes, breviter pedunculati, cum innovationibus e gemma paucisquamata oriundi, foliis præcocioribus integris, serioribus sæpe 3-lobis. Pedunculi fructiferi ad basin ramulorum laterales. Flores interdum varie abnormes segmentis perianthii v. staminibus diminutis v. numero reductis inter perfectos intermixti sunt. Bracteæ sub pedicellis parvæ, angustæ.

Species 1, boreali-Americana. *Meissn. in DC. Prod.* xv. i. 171. *Hayne, Arzneigew.* xii. *t.* 19.

26. **Actinodaphne**, *Nees, Laur. Expos.* 19; *Syst. Laur.* 590. (**Iozoste**, *Nees, Laur. Expos.* 19.)—Flores dioici, subsessiles, fasciculis sessilibus bracteis paucis caducis stipatis. Perianthii tubus brevis; limbi segmenta 6, subæqualia. Stamina perfecta in fl. ♂, et sæpius staminodia in fl. ♀ 9, ordinis primi et secundi eglandulosa, ordinis tertii basi utrinque glandula sæpe stipitata aucta; filamenta angusta; antheræ omnes introrsum 4-locellatæ. Ovarium haud immersum, in fl. ♂ parvum vacuum v. 0, in fl. ♀ in stylum longiusculum attenuatum, stigmate dilatato. Bacca perianthii tubo aucto indurato patente plano disciodeo v. concavo insidens.—Arbores fruticesve. Folia sparsa subopposita v. sæpe per intervalla v. ad apices ramorum conferta fere verticillata, coriacea, penninervia. Florum fasciculi axillares v. laterales, sæpius densi. Pedicelli fructiferi interdum breviter producti.

Species enumeratæ fere 50, Indiæ orientalis, Archipelagi Malayani et Asiæ orientalis usque ad Japoniam incolæ, sed plurimæ reducendæ. *Meissn. in DC. Prod.* xv. i. 210. *Wight, Ic. t.* 1841 *ad* 1843. *Bedd. Fl. Sylv. t.* 295, 296.

27. **Dodecadenia**, *Nees, Laur. Expos.* 19; *Syst. Laur.* 587.—Flores hermaphroditi (v. polygami?), intra bracteas 4-5 imbricatas solitarii, sessiles. Perianthii tubus brevis; limbi segmenta 6 (v. plura?), subæqualia, patentia. Stamina perfecta 12 (v. plura?) ordinis primi et secundi eglandulosa, ordinis tertii et quarti basi utrinque glandula magna aucta; filamenta angusta; antheræ omnes introrsum 4-locellatæ. Ovarium haud

immersum, in stylum longiusculum attenuatum, stigmate valde dilatato. Bacca perianthii tubo aucto crasso subplano discoideo insidens, pedicello brevissimo crassiusculo.—Arbor. Folia sparsa, coriacea, pennivenia, in ramulis floridis brevibus conferta. Gemmæ imbricato-squamatæ. Involucra sessilia, ad axillas solitaria v. sæpius plura, conferta.

Species 1, Indiæ orientalis incola. *Meissn. in DC. Prod.* xv. i. 210.

28. **Litsea,** *Lam. Dict.* iii. 574. (Tetranthera, *Jacq. Hort. Schœnbr.* i. 59, *t.* 113.)—Flores dioici, umbellati v. capitati, umbellis capitulisve ante anthesin involucro globoso inclusis. Perianthii tubus ovoideus campanulatus v. brevissimus; limbi segmenta 6 v. 4 v. abortu pauciora, subæqualia v. parva, rarius minuta v. 0. Stamina in fl. ♂, staminodia in fl. ♀, sæpius 9 v. 12, v. in flore dimero 6, nunc abortu pauciora v. in speciebus paucis plus quam 12, ordinis primi et secundi sæpissime eglandulosa, ordinis tertii et quarti dum adsint et rarius ordinis secundi basi utrinque glandula sæpe stipitata aucta; filamenta sæpius angusta; antheræ omnium introrsum 4-locellatæ, v. in ordine tertio locelli inferiores rarius laterales. Ovarium perianthii tubo inclusum v. emersum, in fl. ♂ parvum vacuum v. 0, rarissime perfectum ovulo evoluto, in fl. ♀ in stylum brevem v. longiusculum attenuatum, stigmate sæpius dilatato irregulariter sublobato. Bacca tubo perianthii parvo immutato v. aucto cupulato v. discoideo insidens.—Arbores rarius frutices. Folia alterna sparsa v. rarius subopposita, pennivenia v. triplinervia, coriacea et perennantia v. rarius tenuiora et decidua; gemmæ nudæ v. imbricato-squamatæ. Involucra globosa, pedicellata v. sessilia, in fasciculos sessiles v. breviter pedunculatos v. racemos axillares v. laterales disposita. Bracteæ involucri 4, 5 v. rarius 6, latæ, concavæ, sese arcte involventes. Flores in involucro sæpius 4 ad 6 rarius 2 tantum v. plus quam 6, ♂ sessiles v. brevissime raro longius pedicellati, ♀ anthesi peracta sæpe evidentius umbellati.

Species descriptæ ultra 140, Asiæ tropicæ et orientalis, ab Archipelago Malayano usque ad Japoniam, Australiæ tropicæ et subtropicæ, Novæ Zelandiæ et Novæ Caledoniæ incolæ, cum paucis boreali-Americanis. *Meissn. in DC. Prod.* xv. i. 177. *Benth. Fl. Austral.* v. 304. *Kurz, For. Fl. Burm.* ii. 296 (*omnes sub Tetranthera*).

Genus a diversis auctoribus varie divisum, nobis melius in integrum servandum videtur, speciebus numerosis in sectiones quatuor potius quam in genera distribuendis, scil.:—

1. *Eulitsea* (*Glabraria*, Blume). Perianthii segmenta sæpe diminuta v. abortiva. Stamina perfecta sæpius plus quam 12. Bacca perianthio immutato v. vix aucto insidens. Species paucæ Asiaticæ v. Australasicæ. *Jacq. Hort. Schœnbr. t.* 113. *Roxb. Corom. Pl. t.* 147. *Wight, Ic. t.* 1834, 1835, omnes sub *Tetranthera*. Glabraria, *Miq. Fl. Ind. Bat.* i. i. 940, *vix Linn.*

2. *Conodaphne,* Blume. Perianthii segmenta sæpius perfecte evoluta. Stamina sæpius 9. Bacca perianthii tubo parvo immutato v. parum aucto plano disciformi v. concaviusculo insidens. Species Americanæ ad 5, Asiaticæ apud auctores fere 80, sed plurimæ valde incertæ. Americanæ paullulum differre videntur habitu floribus intra involucra minus arcte sessilibus et forte glandulis staminum magis stipitatis. Staminodia ordinis quarti nunquam adsunt sed caracteres parum definiti videntur. Inter Asiaticis a Meissnero enumeratas *Tetranthera læta*, *T. longifolia*, aliæque ad *Cylicodaphnem* transferendæ. *Roxb. Corom. Pl. t.* 148 (*L. polyantha*, Juss., *T. monopetala*, Roxb.). *Bot. Mag. t.* 1471 (*Laurus*).

T. californica, Hook. et Arn., a Neesio ad *Oreodaphnes* sectionem relata, a Meissnero ad *Tetrantherum* restituta genus format *Umbellularia*, Nees, inter *Litseam* et *Ocoteam* quasi medium.

3. *Neolitsea.* Folia sæpius triplinervia. Flores sæpius 2-meri, perianthii segmentis 4, staminibus perfectis 6. Fructus *Conodaphnes.* Species enumeratæ 29, Asiaticæ v. Australasicæ. Tetradenia, *Nees, Laur. Expos.* 19, *et in Wall. Pl. As. Rar.* ii. 64, *t.* 176, *non Benth.* Litsæa, *Nees Frat. Cinnam. Disp. t.* 5. *Nees, Syst. Laur.* 621, *non Lam. Meissn. in DC. Prod.* xv. i. 220. *Benth. Fl. Austral.* v. 306. *Kurz, For. Fl. Burm.* ii. 304. *Endl. Iconogr. t.* 44. *Wight, Ic. t.* 132, 1844, 1845. *Bedd. Fl. Sylv. t.* 294.

Sectio quoad species plerasque naturalis, sed character haud constans. Folia in *L. ambigua* et *L. khasyana*, Meissn., pennivenia. Flores in speciebus paucis sæpe more generis 3-meri, et in *Cylicodaphnes* speciebus nonnullis 2-meri observantur. Gemmæ in sectione sæpe imbricato-squamatæ, similes tamen adsunt in *L.* (*Cylicodaphne*) *japonica*, paucisque aliis. Genus *Litsæa* quale a Neesio limitatum ab auctore perperam Jussiæo tribuitur. *Litsea*, Juss., est genus Lamarckianum amplius extensum.

4. *Cylicodaphne*. Folia sæpius pennivenia. Flores sæpius 3-meri, perianthii segmentis 6, staminibus perfectis sæpissime 12. Ovarium perianthii tubo inclusum. Bacca junior sæpe inclusa, matura exserta, perianthii tubo aucto truncato cupulato v. laxiusculo insidens v. basi cincta. Species enumeratæ ultra 40, Asiaticæ v. Australasicæ. *Sieb. et Zucc. Fl. Jap. t.* 87 (*Tetranthera*). *Wight, Ic. t.* 1833 (*Cylicodaphne*), *t.* 1837 *ad* 1840, *et t.* 1846 (*Lepidadenia*) et forte *t.* 1836 (*Tetranthera*). *Bedd. Fl. Sylv. t.* 293 (*Tetranthera*). TOMEX, *Thunb. Fl. Jap.* 190; *Ic. Pl. Jap.* iii. *t.* 7. FIWA, *Gmel. Syst. Nat.* ii. 745. CYLICODAPHNE, *Nees, Laur. Expos.* 18; *Syst. Laur.* 503. *Meisn. in DC. Prod.* xv. i. 200. LEPIDADENIA, *Nees, Laur. Expos.* 19 (charactere falso); *Syst. Laur.* 582.

Sectio *Tomingodaphne*, Blume, qualis a Meisnero (Prod. xv. i. 181) illustrata, species continet quam maxime dissimiles, nec ullo vinculo connexas, e.g. *L. japonicam* quæ characteres omnes *Cylicodaphnes* exhibet, et *C. Wightianæ*, Nees, valde affinis est, et *L. geniculatam* inter *Conodaphnes* Americanas recensenda.

Dolendum est quod auctores recentiores, Neesium secuti, nomen generis Jacquinianum *Tetrantheram* antiquioribus anteponunt. Ex his prius est GLABRARIA, *Linn. Mant.* 156 *et* 276, genus ad iconem et notas Rumphii Herb. Amb. iii. 71, t. 44, conditum, sed valde incertum et ob characterem falsum rejiciendum; Blume et Miquel *G. tersam*, Linn., ad *Litsæam chinensem*, Lam., referunt, sed icon Rumphii vix convenit et flos a Linnæo descriptus omnino alienus. Sequitur TOMEX, *Thunb.*, genus anno 1784 editum nec inepte definitum, sed nomen jam prius a Forskahleo generi Salvadoraceo datum, supra iii. 680 sub nomine *Dobera*, Juss., recensitum ob genus antiquius homonymum Linnæanum. Sed *Tomex*, Linn., ipso fatente, Mant. 331, est *Callicarpæ* species (*C. lanata*, Linn. l. c. non Schau., seu *C. Wallichiana*, Schau.), quod confirmavit *Vahl, Symb.* iii. 13, qui specimen typicum Hermanni vidit. *Tomex*, Forsk., igitur pro *Dobera* substituenda est.

Lamarck, anno 1789, Dict. iii. 574, genus LITSÆAM condidit et bene definivit ad eandem speciem quam Jacquin serius sub nomine TETRANTHERÆ edidit, et nomen suum omnibus prævalere debet. Genus serius extensum et illustratum fuit a Jussiæo, Ann. Mus. Par. vi. 197, in dissertatione optima a Neesio infauste neglecta.

Gmelin, Syst. Nat. 745, nomen *Tomex*, Thunb. in FIWAM mutavit. Loureiro, Fl. Cochinch. 195 et 637, genera HEXANTHUS et SEBIFERA proposuit, quæ ut videtur rite ad species *Litsææ* referenda etsi male definita, et omnia, etsi *Tetranthera* antiquiora, nomini Lamarckiano postponenda sunt.

29. **Umbellularia**, *Nees, Syst. Laur.* 462. (Subgenus Oreodaphnes; genus proprium *Nutt. N. Am. Sylv.* i. 103. Drimophyllum, *Nutt. l. c.* 101, *char. falso, t.* 22.)—Flores hermaphroditi, umbellati, umbellis ante anthesin involucro globoso inclusis. Perianthii tubus brevissimus; limbi segmenta 6, subæqualia. Stamina 9, ordinis primi et secundi eglandulosa, antheris introrsum 4-locellatis in filamentum contractis, ordinis tertii basi utrinque glandula sessili aucta, antheris extrorsum 4-locellatis; staminodia ordinis quarti 0. Ovarium e perianthii tubo exsertum, in stylum attenuatum, stigmate peltati-dilatato. Bacca perianthii tubo vix v. parum aucto discoideo insidens.—Arbor procera, glabra, v. in montibus frutex. Folia alterna, perennantia, petiolata, tenuiter coriacea, pennivenia et insigniter reticulata, odoratissima. Involucra pedunculata, in axillis superioribus solitaria v. ad apices ramorum ∞ conferta, caducissima. Flores in umbella sat numerosi, breviter pedicellati.

Species 1, Californica. *Meisn. in DC. Prod.* xv. i. 192 (*Tetranthera*). *Bot. Mag. t.* 5320 (*Oreodaphne*). Genus anomalum, tribus duas *Laurinearum* arcte connectens. Stamina *Ocoteæ*, inflorescentia *Litsææ*.

30. **Iteadaphne**, *Blume, Mus. Bot. Lugd. Bat.* i. 365.—Flores dioici v. polygami, intra involucrum globosum solitarii. Perianthii tubus brevissimus; limbi segmenta 6, subæqualia (v. interdum pauciora inæqualia ?). Stamina 6 (interdum 7-9), ordinis primi eglandulosa, ordinis secundi (et tertii dum adsint) basi utrinque glandula subsessili aucta, antheris omnibus introrsum 2-locellatis. Ovarium haud immersum; stylus brevis, stigmate parum dilatato. Bacca a nobis non visa, ex Blumeo basi perianthii disciformi insidens.—Arbuscula. Folia sparsa, perennantia at vix coriacea, pennivenia. Involucra minima, ♂ breviter pedicellata, in axillis racemosa, rhachi communi bracteata; ♀ et ☿ paullo longius pedicellata, solitaria v. fasciculata.

Species 1, Archipelagi Malayani incola, a Meisnero in DC. Prod. xv. i. 248, ad sectionem *Aperula*

reducta, sed habitu involucris 1-floris et inflorescentia satis differre videtur. In floribus 2 a nobis examinatis, altero ♂ altero ☿ ex eodem specimine, perianthii segmenta et stamina 6 invenimus. Involucra vix semilineam diametro.

31. **Lindera,** *Thunb. Fl. Jap.* 9 *et* 145, *t.* 21, *charactere falso.* (Daphnidieæ, *Meissn. in DC. Prod.* xv. i. 228, *excepta Lauro.*)—Flores dioici, umbellati v. capitati, umbellis capitulisve ante anthesin involucro globoso v. rarius ovoideo inclusis. Perianthii tubus brevissimus; limbi segmenta 6, subæqualia, rarius pauciora v. 7–9. Stamina in fl. ♂, staminodia in fl. ♀, sæpissime 9, rarissime pauciora v. plura, ordinis primi et secundi sæpissime eglandulosa, ordinis tertii et rarissime etiam secundi basi v. supra basin utrinque glandula sessili v. stipitata aucta; filamenta angusta; antheræ omnes introrsum 2-locellatæ; stamina v. staminodia ordinis quarti desunt. Ovarium haud immersum, in fl. ♂ parvum vacuum v. 0 rarissime hinc inde perfectum, in fl. ♀ in stylum brevem v. longiusculum attenuatum, stigmate dilatato integro v. sublobato. Bacca globosa v. ovoidea, pedicello nudo v. perianthii basi parum dilatatæ v. disciformi integræ v. 6-dentatæ insidens.—Arbores v. frutices. Folia alterna v. subopposita, pennivenia v. 3–5-nervia, coriacea et perennantia v. sæpius tenuiora et annua. Gemmæ variant nudæ v. imbricato-squamatæ. Involucra sessilia v. pedicellata, in fasciculos sessiles disposita v. rarius breviter racemosa. Bracteæ involucri 4, rarius 5 (rarissime 2) latæ, concavæ, sese arcte involventes. Flores in involucro 4–6 v. rarius ∞, sessiles v. ♀ pedicellati. Perianthii segmenta petaloidea sæpius parva.

Species fere 50, Asiæ tropicæ et orientalis usque ad Japoniam, et Americæ borealis incolæ. *Meissn. l. c. Kurz, For. Fl. Burm.* ii. 306 (*Daphnidium*) *et* 308 (*Lindera*).

Genus ab auctoribus varie divisum, imprimis ad gemmas foliigenas nudas v. imbricato-squamatas, character valde incertus et rarius in speciminibus siccis probandus, si tamen genus in integrum serves facile distinguendum, *Litseæ* sectioni *Conodaphni* fructu compar, differt antheris 2- nec 4-locellatis, in sectiones sequentes imprimis ad folia et quodammodo ad inflorescentiam limitatas dividendum.

1. *Benzoin.* Folia pennivenia, indivisa, sæpius annua. Flores precoces, involucris sessilibus v. breviter pedicellatis. Gemmæ imbricato-squamatæ v. subnudæ. Species ad 10, Americanæ et Asiaticæ. *Bot. Mag. t.* 1470 (*Laurus*). BENZOIN, *Nees, Laur. Expos.* 17, *non Hayne.* LINDERÆ § 1 et 2, *Meissn. in DC. Prod.* xv. i. 244.

EUOSMUS, *Nutt. Gen. N. Am. Pl.* i. 258, includit sect. *Benzoin* cum specie *Litseæ.*

2. *Sassafrimorpha.* Folia 3–5-nervia, indivisa v. 2–3-loba, annua et interdum demum coriacea. Flores præcoces v. subcoetanei, involucris sessilibus v. breviter pedicellatis. Gemmæ subnudæ, rarius imbricato-squamatæ. Species 3, Asiaticæ. LINDERÆ § 3, *Meissn. l. c.* 246.

3. *Daphnidium.* Folia triplinervia, integra, coriacea. Flores coetanei v. rarius in ramis aphyllis, involucris sessilibus glomeratis. Gemmæ paucisquamatæ v. nudæ, rarius imbricato-squamatæ. Species descriptæ 12, Asiaticæ. DAPHNIDIUM, *Nees, Laur. Expos.* 19. DAPHNIDII § 1, *Meissn. l. c.* 228. *D. elongatum*, Nees, ad *Litseæ* sectionem *Eulitseam* transferendum est.

4. *Cephalodaphne*, Blume. Folia pennivenia, integra, coriacea. Flores coetanii, involucris sessilibus glomeratis. Gemmæ imbricato-squamatæ. Species 5, Asiaticæ. DAPHNIDII § 2, *Meissn. l. c.* 231.

5. *Polyadenia.* Omnia *Cephalodaphnes* nisi folia majora et stamina ordinis secundi (et interdum fide Neesii etiam ordinis primi) prope basin 2-glandulosa. Species 1, Asiatica. POLYADENIA, *Nees, Laur. Expos.* 18; *Syst. Laur.* 571, *Meissn. l. c.* 232, genus fuit e variis *Litseæ* et *Linderæ* speciebus compositum, a Meissnero l. c. reducitur ad *P. reticulatam*, Nees. Miquel, Fl. Ind. Bat. i. i. 960, sub *Polyadenia* includit etiam sectionem sequentem.

6. *Aperula.* Folia pennivenia, integra, membranacea v. coriacea, annua v. perennantia. Flores precoces v. coetanei, umbellis omnibus pedunculatis fasciculatis. Gemmæ nudæ v. paucisquamatæ. Species ad 15, Asiaticæ. APERULA, *Blume, Mus. Bot. Lugd. Bat.* i. 365. APERULÆ § 1, *Meissn. l. c.* 240.

32. **Laurus,** *Linn. Gen. n.* 503.—Flores dioici v. hermaphroditi, umbellati, umbellis ante anthesin involucro globoso inclusis. Perianthii tubus brevis; limbi segmenta 4, subæqualia. Stamina in fl. ♂ perfecta 12 v. plura, rarius 8, filamentis omnibus medio v. prope basin utrinque glandula stipitata auctis v. rarius stamina ordinis primi et secundi eglandulosa; antheræ omnes breves, introrsum 2-locellatæ; staminodia in fl. ♀ sæpius 4.

Ovarium haud immersum, stylo brevi, stigmate parum dilatato. Bacca ovoidea, perianthii tubo immutato v. parum aucto disciformi integro v. lacero insidens.—Arbores. Folia alterna, perennantia, penninervia. Florum involucra ad axillas breviter pedunculata, fasciculata v. breviter racemosa.

Species 2, altera regionis Mediterraneæ, altera ins. Canariensium incola. *Meisn. in DC. Prod.* xv. i. 233. *Sibth. Fl. Græc. t.* 365. *Hayne, Arzneigew.* xii. *t.* 18. *Reichb. Ic. Fl. Germ. t.* 673. *Webb, Phyt. Canar. t.* 206.

Tribus III. Cassytheæ.

33. **Cassytha,** *Linn. Gen. n.* 505. (Volutella, *Forsk. Fl. Æg. Arab.* 84. Calodium, *Lour. Fl. Coch.* 247.)—Flores hermaphroditi interdum dimorphi (an subdioici?). Perianthii tubus turbinatus v ovoideus, post anthesin apice constrictus; limbi segmenta 6, 3 exteriora multo minora. Stamina perfecta 9, ordinis primi et secundi eglandulosa antheris introrsum 2-locellatis, v. rarius ordinis secundi ad staminodia angusta reducta, ordinis tertii basi utrinque glandula subsessili aucta, antheris extrorsum 2-locellatis; staminodia ordinis quarti subsessilia v. stipitata. Ovarium per anthesin perianthii tubo vix immersum, mox tubo aucto apice clauso omnino obtectum. Stigma parvum v. capitatum, subsessile. Fructus perianthii tubo succulento arcte inclusus, limbo persistente sæpius coronatus. Seminum testa membranacea, cotyledones inter sese arcte appressæ non nisi primo juventute distinctæ, maturæ perfecte conferruminatæ.—Caules volubiles, filiformes, mediantibus haustoriis seriatis plantis variis adhærentes; squamæ loco foliorum minimæ. Flores parvi, nunc minuti, spicati capitati v. racemosi, intra bracteam squamiformem sessiles v. breviter pedicellati, bracteolis 2 minutis stipati. Perianthii tubus sæpe in eadem specie in aliis speciminibus brevissimus in aliis globosus limbo æquilongus.

Species ad 15, quarum una per regiones tropicas utriusque orbis late dispersa, 1 v. 2 austro-Africanæ, 1 Borneensis, cæteræ omnes Australienses. *Meisn. in DC. Prod.* xv. i. 252, *et in Mart. Fl. Bras.* v. ii. 295, *t.* 107. *Benth. Fl. Austral.* v. 309. *Gærtn. Fruct.* i. 133, *t.* 27. *Hook. Exot. Fl. t.* 167. *Wight, Ic. t.* 1847. *F. Muell. Pl. Vict.* ii. *t.* 68.

Genus habitu a toto ordine insigniter differt, characteres tamen floris et fructus fere *Cryptocaryæ*.

Tribus IV. Hernandieæ.

34. **Hernandia,** *Linn. Gen. n.* 1049; *Hort. Cliff. t.* 33. (Hertelia, *Neck. Elem.* ii. 345).—Flores monoici. Perianthii segmenta in fl. ♂ 6 v. 8, in fl. ♀ 8 v. 10, in quaque serie subvalvata, herbacea. Stamina in fl. ♂, staminodia in fl. ♀, tot quot perianthii segmenta exteriora iisque opposita; antheræ 2-locellatæ, locellis more ordinis immersis, oblongis magnis lateralibus v. subintrorsum spectantibus, valvis lateraliter dehiscentibus v. cito deciduis; glandulæ ad basin staminum geminæ solitariæ v. rarius 0. Fl. ♀ involucello cupulato v. lobato basi cincti. Ovarium inferum, carnosum; stylus brevis crassus, stigmate dilatato irregulariter dentato v. lobato. Fructus involucello aucto carnoso v. crasse membranaceo inclusus. Semen globosum v. ovoideum, testa crassa dura; embryo cotyledonibus crassis lobatis rugosis v. subruminatis.—Arbores. Folia alterna, sæpius ampla, integra, ovata v. peltata, 3-7-nervia. Flores laxe paniculati, paniculæ ramis ultimis involucro 4-5-bracteato terminatis, floribus in involucro 3, centrali ♀ sessili, lateralibus 2 ♂ breviter pedicellatis. Involucella fructifera inflata, sæpe colorata, 1-2-pollicaria, ore contracto integerrima v. alte 2-fida.

Species descriptæ 8, per regiones tropicas utriusque orbis late dispersæ. *Meisn. in DC. Prod.* xv. i. 262. *Benth. Fl. Austral.* v. 314. *Aubl. Pl. Gui. t.* 329. *Gærtn. Fruct. t.* 40. *Wight, Ic. t.* 1855. *Bedd. Fl. Sylv. t.* 300. *Seem. Fl. Vit. t.* 52. *Bot. Mag. t.* 5830.

Hernandiopsis, *Meisn. in DC. Prod.* xv. i. 264, est *H. cordigera*, Vieill., species Novo-Caledonica, *H. Moerenhoutianæ*, Guillem., simillima, sed glandulæ staminum desunt v. rarius 1 v. 2 in toto flore adsunt.

Hernandia, ob habitum distinctum et antherarum valvas lateraliter nec sursum aperiendas, apud plures auctores ordinem distinctum format, nobis tamen bene videtur sub *Laurineis* pro tribu distincto militare.

ORDO CXLIV. **PROTEACEÆ.**

Endl. Gen. 336. Lindl. Veg. Kingd. 532. R. Br. in Trans. Linn. Soc. x. 15. Baill. Hist. Pl. ii. 385.

Flores **hermaphroditi v. abortu polygami v. dioici, stylo tamen in fl. ♂ staminodiis in fl. ♀ nunquam deficientibus, regulares obliquæ v. quodammodo irregulares. *Perianthium* inferum, e segmentis 4 primum valvatim cohærentibus, tubo cylindraceo v. basi latiore, limbo globoso ovoideo v. tubo vix latiore, segmentis per anthesin apice v. usque ad basin plus minus solutis recurvisque. *Stamina* 4, segmentis opposita iisque ad basin laminarum v. inferius affixa, perianthio semper breviora, filamentis brevibus v. subnullis, rarius antheræ æquilongis. *Antheræ* erectæ, in flore hermaphrodito omnes perfectæ v. rarius una abortiva, connectivo cum filamento continuo, loculis 2 sæpius introrsum adnatis parallelis. *Squamellæ* v. glandulæ hypogynæ in pluribus generibus 4, staminibus alternæ, liberæ v. plus minus connatæ, in aliis generibus deficientes. *Ovarium* liberum, sessile v. stipitatum, 1-loculare, sæpius obliquum v. excentricum. *Stylus* terminalis, brevis v. elongatus, apice sæpius varie incrassatus, stigmate parvo terminali v. sublaterali. *Ovula* solitaria v. gemina collateralia v. rarius fere superposita, v. ∞ 2-seriatim superposita, nunc apice v. juxta apicem affixa et superposita, nunc lateraliter affixa, amphitropa v. fere anatropa, ascendentia v. descendentia, micropyle semper infera et sæpe prominula. *Fructus* nunc nuceus v. drupaceus et indehiscens, nunc demum margine interiore v. apice dehiscens, follicularis v. capsularis, valvis sæpius crasse coriaceis. *Semina* 1–2 v. pauca, plano-compressa v. crassa, testa membranacea v. coriacea, interdum varie in alam producta. *Albumen* 0. *Embryo* semini conformis, cotyledonibus nunc plano-compressis parallelis æqualibus, nunc crasso-carnosis uno sæpius altero majore ; radicula brevis, recta, infera v. lateralis, in sinu basali cotyledonum sæpe retracta.**

Frutices arboresve, rarius herbæ duræ perennes. Folia alterna v. sparsa, rarius opposita v. verticillata, integerrima grosse dentata v. interdum in eadem planta pinnatisecta v. decomposita, sæpissime coriacea. Stipulæ 0. Flores capitato-spicati racemosi v. rarius solitarii, secus rhachin sparsi, singuli v. per paria bractea suffulti rarissime 2-bracteolati. Bracteæ nunc minimæ caducissimæ v. fere obsoletæ, nunc imbricatæ persistentes in fructu induratæ strobilum formantes.

Species ad 950, pro maxima parte Australiæ v. Africæ australi propriæ, nonnullæ per Americam australem tropicam v. extratropicam v. Asiam tropicam et insulas maris Pacifici australis dispersæ, perpaucæ inter Africanas usque ad regiones tropicas extensæ, in temperatis hemisphærii borealis omnino desunt.

Ordo optime definitus a nemine cum ullo alio confusus, *Thymelæaceis Laurineisque* plerumque approximatur, sed ab utroque ordine perianthio staminibus fructu habituque abunde distinctus.

Series I. Nucamentaceæ. Flores subquaque bractea sæpissime solitarii. Nux v. drupa indehiscens.

Tribus I. Proteeæ. Antheræ omnes perfectæ v. postica rarissime effœta, ad basin laminarum affixæ. Ovulum 1, lateraliter affixum v. a basi ascendens, amphitropum v. anatropum. Nux sicca.

* *Flores abortu dioici, regulares.*

1. AULAX. Flores ♂ cylindraceo-spicati, ♀ capitati. Bracteæ in capitulo fructifero angustæ. —*Afr. austr.*

2. LEUCADENDRON. Flores utriusque sexus capitati. Capitula fructifera bracteis latis imbricatis strobiliformia.—*Afr. austr.* (*et trop.?*).

** *Flores hermaphroditi, irregulares. Perianthii segmentum posticum per anthesin solutum.*

3. PROTEA. Perianthii segmenta 3 usque ad apicem v. saltem ultra antheras connata. Capitula fructifera strobiliformia, sæpius magna, bracteis involucrantibus latis imbricatis. —*Afr. austr. et trop.*

4. LEUCOSPERMUM. Perianthii segmentorum trium laminæ antheriferæ per anthesin solutæ recurvæ. Capitula fructifera globosa v. rarius ovoidea, bracteis involucrantibus strobiliformia v. bracteis deciduis denudata.—*Afr. austr.*

5. FAUREA. Perianthii segmenta 3 fere ad apicem connata. Spicæ elongatæ, cylindraceæ, fructiferæ post perianthia delapsa ovariis pilosis dense plumosæ.—*Afr. aust. et trop., Madagasc.*

*** *Flores hermaphroditi, regulares v. subregulares.*

† *Flores capitati. Squamæ hypogynæ 4 lineares v. subulatæ. Genera austro-Africana.*

6. SERRURIA. Folia lineari-teretia, sæpissime dissecta. Capitula multiflora, subglobosa, terminalia, sæpius pedunculata v. corymbosa, floribus parvulis. Stigma terminale, truncatum. —*Afr. austr.*

7. MIMETES. Folia indivisa, nunc plana capitulis in axillis superioribus sessilibus floribus majusculis sæpe paucis, nunc ericoidea capitulis multifloris ad apices ramorum sessilibus floribus parvulis. Stigma terminale v. obliquum, parvum.—*Afr. austr.*

8. SOROCEPHALUS. Folia ericoidea v. imbricata. Capitula parva, 1–6-flora, in spicam globosam v. corymbum densum terminalem conferta. Nucis stipes v. basis ipsa indurata, persistens. Stigma parvum, terminale.—*Afr. austr.*

9. NIVENIA. Folia varia. Capitula 4-flora, in spicam densam cylindraceam v. subglobosam terminalem conferta. Nux basi non dilatata. Stigma parvum, terminale.—*Afr. austr.*

10. SPATALLA. Folia tenuia, conferta, indivisa. Capitula 1–4-flora, in spicam laxam terminalem conferta. Stigma valde obliquum v. laterale v. in medio disco terminale.—*Afr. austr.*

†† *Flores dense capitati. Squamæ hypogynæ 0. Genera Australiana.*

11. PETROPHILA. Capitula fructifera strobiliformia, bracteis induratis post nuces delapsas persistentibus. Nuces compressæ.—*Australia.*

12. ISOPOGON. Capitula fructifera bracteis deciduis denudata, v. bracteæ membranaceæ arcte appressæ cum nucibus deciduæ. Nuces haud compressæ.—*Australia.*

††† *Genera anomala Australiana.*

13. ADENANTHOS. Flores intra involucrum 4–8-bracteatum solitarii. Glandulæ hypogynæ 4. —*Australia occid. extratrop.*

14. STIRLINGIA. Capitula ∞-flora. Antheræ in cylindrum circa stylum cohærentes. Squamæ hypogynæ 0. —*Australia occid. extratrop.*

Tribus II. Conospermeæ. Anthera 1 perfecte 2-locularis, 2 laterales loculo 1 perfecto primum cum loculo contiguo antheræ perfectæ in unum connato, antheræ quartæ loculo utroque effœto. Ovulum 1. Nux sicca. Flores parvuli, spicati.

15. SYNAPHEA. Anthera postica abortiva membraniformis, cum stigmate cohærens. Nux ovoidea v. oblonga. Folia sæpius divisa.—*Australia occid. extratrop.*

16. CONOSPERMUM. Anthera antica abortiva. Stigma stamina superans. Nux apice truncata et carnosa. Folia indivisa.—*Australia extratrop.*

Tribus III. Franklandieæ. Antheræ omnes perfectæ, intra tubum longum inclusæ. Ovulum 1. pendulum. Nux sicca.

17. FRANKLANDIA. Folia dichotoma. Flores longi, racemosi.—*Australia occid. extratrop.*

Tribus IV. Persoonieæ. Stamina infra laminas v. prope basin segmentorum affixa, antheris omnibus perfectis. Ovula 2 v. 1, rarius ∞, ab apice pendula, orthotropa, v. rarius lateraliter affixa amphitropa ascendentia v. descendentia. Fructus nuceus v. drupaceus indehiscens. Seminum cotyledones sæpius crassæ, inæquales.

* *Squamæ hypogynæ* 0. *Genera Australiana.*

18. SYMPHYONEMA. Filamenta *infra antheras liberas circa stylum cohærentia.* Ovula 2, pendula. Nux oblonga. Folia dissecta. Flores laxe spicati.—*Australia.*

19. BELLENDENA. Ovula 2, pendula. Fructus membranaceus, planus, ala angusta cinctus. Folia integra v. apice dentata. Racemus terminalis, pedunculatus, densus.—*Tasmania.*

20. AGASTACHYS. Ovulum 1, lateraliter affixum, descendens. Nux 3-alata. Folia integra. Spicæ axillares, elongatæ.—*Tasmania.*

** *Squamæ v. glandulæ hypogynæ* 4, *distinctæ. Genera Australasica* (*et Mascarense?*).

21. BEAUPREA. Ovulum 1, lateraliter affixum, ascendens. Drupa ellipsoidea v. globosa, styli cicatrice fere basali. Folia indivisa v. pinnata. Spicæ paniculatæ.—*Nov. Caled.*

22?. DILOBEIA. Folia ampla, 2-loba. Spicæ paniculatæ *Beaupreæ.* Flores dioici?—*Madagascaria.*

23. CENARRHENES. Ovulum 1, pendulum. Drupa compresso-globosa, styli cicatrice terminali. Folia integra v. dentata. Spicæ axillares.—*Tasmania.*

24. GARNIERIA. Ovula ∞, horizontalia v. descendentia. Drupa compressa, endocarpio crasso lignoso. Folia integra v. dentata. Spicæ axillares.—*Nov. Caled.*

25. PERSOONIA. Ovula 2 v. 1, pendula. Fructus drupaceus. Folia integra. Flores axillares, solitarii v. fasciculati, rarius in racemum terminalem conferti.—*Australia, Nov. Zel.*

*** *Discus hypogynus breviter cupulatus. Genus Africanum.*

26. BRABEIUM. Ovula 2 v. 1, pendula. Drupa velutina, endocarpio lignoso. Folia verticillata, indivisa. Racemi axillares, densi.—*Afr. austr.*

(31, MACADAMIA a *Brabeio* parum differt inflorescentia. In 39, CARNARVONIA, flores fere *Persooniearum* cum fructu *Grevilleearum.*)

Series II. Folliculares. Flores sæpissime secus rhachin geminati, bractea dum adsit sub quaque pari unica. Fructus follicularis capsularis v. rarius vix dehiscens subdrupaceus.

Tribus V. Grevilleeæ. Ovula 2 rarius 4, collateralia. Flores racemosi v. fasciculati, involucro 0 v. inconspicuo, bracteis deciduis.

* *Ovula* 2, *pendula, orthotropa. Fructus vix v. tardius dehiscens, pericarpio crasso carnoso v. duro. Seminum cotyledones crassæ, sæpe inæquales.*

27. PANOPSIS. Perianthium rectum. Stamina infra medium segmentorum affixa, filamentis complanatis. Discus cupulatus, 4-lobus. Folia indivisa, alterna, rarius subverticillata.—*Amer. trop.*

28. EUPLASSA. Perianthium obliquum, limbo recurvo. Antheræ in laminis sessiles. Glandulæ hypogynæ 4, stipiti ovarii adnatæ. Folia indivisa.—*Guiana, Brasilia.*

29. GUEVINA. Perianthii limbus recurvus. Antheræ in laminis subsessiles. Discus semi-annulatus, 2-lobus. Folia pinnata.—*Chile.*

30. KERMADECIA. Perianthium fere rectum. Antheræ in laminis subsessiles. Discus semi-annulatus. Receptaculum valde obliquum. Folia indivisa v. pinnata.—*Nov. Caled.*

31. MACADAMIA. Perianthium fere rectum. Stamina paullo infra laminas affixa filamentis brevibus. Discus annulatus 4-lobus v. 4-partitus. Folia verticillata, indivisa.—*Australia or.*

** *Ovula* 2, *pendula, orthotropa. Fructus follicularis v. oblique* 2-*valvis. Semina compressa, marginata v. ala cincta.*

32. ROUPALA. Perianthium fere rectum. Antheræ in laminis fere sessiles. Squamæ hypogynæ 4 v. discus annularis. Folia sparsa, sæpius indivisa. Flores racemosi.—*Amer. trop., Nov. Caledonia.*

33. LAMBERTIA. Perianthium fere rectum. Antheræ in laminis subsessiles. Squamæ hypogynæ 4 v. discus annularis. Folia verticillata, indivisa. Flores solitarii v. septeni, involucrati.—*Australia extratrop.*

*** *Ovula* 2, *lateraliter affixa v. ascendentia. Fructus globosus v. ovoideus, durus, vix dehiscens.*

34. XYLOMELUM. Perianthium fere rectum. Glandulæ hypogynæ 4. Semen samaroideum in alam productum. Folia opposita. Spicæ densæ.—*Australia.*

35. HELICIA. Perianthium fere rectum. Glandulæ hypogynæ 4. Semen v. semina 2 crassa exalata. Folia alterna. Racemi laxiusculi.—*Asia trop., Australia.*

**** *Ovula 2, lateraliter affixa v. ascendentia. Fructus follicularis.*

36. Oritis. Perianthium rectum, parvulum. Glandulæ hypogynæ 4. Semina samaroidea, ala terminali. Flores denso racemosi v. spicati—*Australia, mont. Chile.*

37. Grevillea. Perianthii tubus per anthesin sæpius hinc fissus, limbo obliquo v. recurvo. Discus sæpius semi-annularis. Semina anguste alata v. exalata. Inflorescentia sæpius terminalis.—*Australia, Nov. Caled.*

38. Hakea. Perianthii tubus per anthesin sæpius hinc fissus, limbo obliquo v. recurvo. Discus semi-annularis. Semina samaroidea, ala oblonga terminali. Inflorescentia axillaris.—*Australia.*

39. Carnarvonia. Perianthium rectum, parvulum. Glandulæ hypogynæ 0. Semina samaroidea, ala oblonga terminali. Racemi axillares.—*Australia.*

***** *Ovula 4, lateraliter affixa. Fructus follicularis.*

40. Buckinghamia. Perianthium sub limbo globoso revolutum. Discus semiannularis. Semina plana, ala angusta cincta. Flores parvuli, racemis terminalibus.—*Australia trop.*

41. Darlingia. Perianthium rectum. Glandulæ hypogynæ 4. Semina plana, ala angusta cincta. Spicæ paniculatæ, terminales.—*Australia trop.*

Tribus VI. Embothrieæ. Ovula 4 v. sæpius ∞, 2-seriatim imbricata. Flores racemosi umbellati v. capitati, sæpe involucrati. Semina sæpius lamina tenui v. substantia farinosa separata.

* *Ovula ∞, deorsum imbricata.*

42. Cardwellia. Flores racemosi. Squamæ hypogynæ distinctæ. Semina ala cincta.—*Austral. trop.*

43. Stenocarpus. Flores umbellati. Discus hypogynus cupulatus v. obsoletus. Semina deorsum in alam producta.—*Australia, Nov. Caled.*

** *Ovula sursum imbricata. Semina samaroidea, ala terminali oblonga.*

44. Lomatia. Glandulæ hypogynæ 3. Styli apex in discum lateralem expansus. Ovula ∞. Racemi exinvolucrati.—*Australia, Chile.*

45. Embothrium. Discus semiannulatus. Styli apex oblongo-fusiformis v. oblique subdisciformis. Ovula ∞. Racemi densi, terminales, exinvolucrati v. bracteis paucis cincti.—*Amer. austr. extrop. v. andina.*

46. Telopea. Discus subinteger, obliquus. Styli apex clavatus. Ovula ∞. Racemi densi, terminales, bracteis coloratis imbricatis involucrati.—*Australia.*

47. Knightia. Glandulæ hypogynæ 4, distinctæ. Styli apex lineari-clavatus. Ovula 4. Racemi densi, bracteis imbricatis involucrati v. nudi.—*Nov. Zel., Nov. Caled.*

Tribus VII. Banksieæ. Ovula 2, collateralia. Flores denso capitati v. spicati, capitulis spicisve strobilinis v. involucratis. Semina lamina simplici v. duplici sæpissime separata.

48. Banksia. Spicæ v. strobili a basi florentes, rhachi v. receptaculo sæpius elevato v. elongato.—*Australia.*

49. Dryandra. Spicæ v. strobili bracteis vacuis imbricatis involucrati, receptaculo sæpius plano v. leviter convexo.—*Australia occid. extratrop.*

GENERA EXCLUSA V. DUBIA.

Cylindria, Lour. Fl. Cochinch. 69, arbor Cochinchinensis a botanicis recentioribus ignota, ad *Proteaceas* a pluribus approximatur, quia auctoris descriptio corollæ et staminum satis cum perianthio et staminibus *Proteacearum* conveniunt, sed calyx, stylus, bacca, semen et habitus omnino abhorrent, et genus valde dubium remanet.

Potameia, Thou., a Baillonio ad **Laurineas** refertur.

Tribus I. Proteeæ.

1. **Aulax,** *Berg. Descr. Pl. Cap.* 23.—Flores abortu dioici, regulares. Fl. ♂ : Perianthium lineare, rectum, limbo vix latiore, segmentis per anthesin solutis angustis erectis. Antheræ lineares, in medio segmento filamentis brevissimis affixæ, connectivo haud producto. Squamæ hypogynæ 0. Ovarii rudimentum parvum, stylo tamen subulato

elongato apicem versus sæpius incrassato. Fl. ♀: Perianthium urceolatum, tubo anguste pyramidato angulato, lobis linearibus recurvo-patentibus. Staminodia linearia, effœta. Squamæ hypogynæ 0. Ovarium longe densissimeque pilosum; styli apex leviter clavatus, stigmate oblongo obliquo; ovulum 1, prope basin loculi ascendens, anatropum. Nux densissime pilosa.—Frutices glabri, dense foliati. Folia sparsa, angusta, coriacea, indivisa. Ramuli floriferi breves, inter folia sessiles, subumbellati, ♂ racemiformes, cylindracei, dense multiflori, ♀ dense capitati, foliis caulinis summis dense involucrati, capitulo etiam intra involucrum ramulis brevibus acerosa-multifidis cincto. Bracteæ inter flores lineares. Flores ♂ breviter pedicellati, ♀ sessiles.

Species 2, austro-Africanæ. *Meisn. in DC. Prod.* xiv. 212. *Trattin. Thes. Bot. t.* 9. *Bot. Reg. t.* 1015 (♂). *Andr. Bot. Rep. t.* 76 (♂), 248 (♀) (*Protea*). Ramuli multifidi seu bracteæ plumosæ capitula ♀ intra involucrum cingentes sunt verisimiliter racemi ♂ abortivi.

2. **Leucadendron,** *R. Br. in Trans. Linn. Soc.* x. 50, *non Linn.* (Protea, *Linn. Gen. n.* 111, *non ejusd. Gen. ed.* 1. Conocarpus *Adans. Fam.* ii. 284, *non Linn.*)—Flores abortu dioici, regulares. Fl. ♂: Perianthium lineare, rectum v. subincurvum, limbo parum incrassato; segmentis demum supra medium v. usque ad basin solutis recurvo-patentibus. Antheræ ad basin laminarum subsessiles, oblongæ v. lineares, connectivo ultra loculos brevissime v. haud producto. Squamæ hypogynæ 4 lineares v. 0. Ovarii rudimentum stylo elongato superne oblongo papilloso superatum. Fl. ♀: Perianthium masculo subsimile v. segmentis diutius connatis. Antheræ effœtæ. Ovarium angustum, stylo apice oblongo v. lineari-fusiformi, stigmate terminali emarginato v. rarius descendente; ovulum 1, lateraliter affixum, amphitropum. Nux sæpius lata, plus minus compressa, margine obtusa acuta v. alata.—Frutices v. arbores, incani puberuli v. glabri. Folia sparsa, coriacea, indivisa, integerrima. Flores intra bracteas solitarii, sessiles, ad apices ramorum capitati, capitulis sæpius foliis floralibus caulinis similibus v. latioribus coloratisque cinctis; capitula fructifera sæpius late strobiliformia, squamis involucri bracteisque latis coriaceis v. induratis imbricatis. Bracteæ sub floribus per anthesin parvæ, demum auctæ, exterioribus sæpius vacuis involucrum intra folia floralia formantibus.

Species descriptæ fere 70, Africæ australis incolæ, nonnullæ tamen reducendæ.—*Meisn. in DC. Prod.* xiv. 213. *Salisb. Parad. Lond. t.* 75, 105 (*Euryspermum*). *Breyn. Cent. t.* 9. *Jacq. Hort. Schœnbr. t.* 26, 27, 401. *Andr. Bot. Rep. t.* 307, 429, 461, 495, 541, 572. *Bot. Mag. t.* 878, 881, 1650. *Bot. Reg. t.* 402, 826, 979 (ic. aliæ sub *Protea*, aliæ sub *Leucadendro*).

Nomina plurima præter *Leucadendron* ante Linnæum a Plukenetio aliisque *L. argenteo*, Br., imposita fuerunt, nulla tamen nec a Plukenetio nec ab aliis generice definita. *Leucadendron*, Linn., ad *Proteam* ipsam reductum est, et Brown primus genus nostrum sub hoc nomine constituit. Salisbury, Parad. Lond. sub t. 67, species typicas pericarpio exalato tumido sub *Protea* retinuit, et species pericarpio alato generice separavit, sub nominibus, Euryspermum, *Salisb. in Knight, Prot.* 18, et Chasme, *Salisb. in Knight, Prot.* 16. Brown tamen species dioicas omnes sub *Leucadendro* conjunxit, quem secuti sunt botanici posteriores.

Gissonia, *Salisb. in Knight, Prot.* 32, includit *L. plumosum*, Br., speciesque v. varietates affines habitu peculiari, capitulis ♂ ovoideis, squamis arcte imbricatis insignes.

Leucandrum, *Neck. Elem.* i. 106, et Vionæa, *Neck. l.c.* 107, ex charactere valde imperfecto verisimiliter ad *Leucadendrum* referendæ sunt.

3. **Protea,** *Linn. Gen. ed.* i. 22, *et auct. recent.*, *non Linn. Gen. ed. seq.* (Leucadendron, *Linn. Gen. n.* 110. Erodendron, *Salisb. Parad. Lond. t.* 67, 70, 76, 108, *et in Knight, Prot.* 34. Pleuranthe, *Salisb. in Knight, Prot.* 49.)—Flores hermaphroditi, irregulares. Perianthium lineare, basi latius, a dorso sæpe compressus, plerumque incurvus, limbo obliquo parum latiore, segmento postico angusto per anthesin a basi soluto, 3 inferioribus in labium recurvum integrum v. summo apice breviter 2–3-fidum connatis. Antheræ in limbo subsessiles, liberæ, lineares, connectivo ultra loculos producto appendiculatæ. Squamæ hypogynæ 4, lineares, tenues v. obsoletæ. Ovarium longe denseque pilosum; styli rigidi apex subulatus compressus angulatus v. anguste 2-alatus, stigmate parvo

terminali v. obliquo; ovulum 1, lateraliter affixum v. ascendens, plus minus amphitropum. Nux dense barbata, stylo persistente glabro caudata.—Frutices v. arbusculæ. Folia alterna v. sparsa, coriacea, rigida, integerrima. Flores sub quaque bractea sessiles, solitarii, dense capitati, capitulis sæpius magnis globosis v. rarius oblongis strobiliformibus, receptaculo crasso plano v. convexo. Squamæ involucrantes numerosæ, imbricatæ, coriaceæ, v. interiores interdum elongatæ membranaceæ nigricantes v. coloratæ.

Species ad 60, fere omnes Africæ australis extratropicæ incolæ, 1 v. 2 in Africa tropica usque ad Abyssiniam extensæ. *Meisn. in DC. Prod.* xiv. 230. *Sm. Exot. Bot. t.* 44, 81. *Bonpl. Jard. Malm. t.* 59. *Trattin. Thes. Bot. t.* 11, 12. *Link, Kl. et Otto, Ic. Pl. Rar. t.* 22. *Grant in Trans. Linn. Soc.* xxix. *t.* 92. *Bot. Mag. t.* 346, 649, 674, 698, 770, 933, 1183, 1713, 1717, 2065, 2439, 2447. *Bot. Reg. t.* 20, 47, 208, 351, 569. *Andr. Bot. Rep. t.* 103, 110, 132, 133, 144, 270, 277, 288, 289, 301, 409, 437, 438, 442, 453, 469, 500, 526, 532, 543, 577, 582, 646.

4. **Leucospermum,** *R. Br. in Trans. Linn. Soc.* x. 95. (Leucadendron, *Salisb. Parad. Lond. sub t.* 67, *et in Knight, Prot.* 52. Diastella, *Salisb. in Knight Prot.* 61.)—Flores hermaphroditi, irregulares. Perianthium lineare, incurvum, basi parum latius, limbo oblongo, segmento postico angusto per anthesin a basi soluto, 3 inferioribus basi connatis laminis liberis recurvis. Antheræ in laminis subsessiles, oblongæ v. ovatæ, connectivo brevissime producto apiculatæ. Squamulæ hypogynæ 4, lineares. Ovarium subsessile, parce pilosum; styli apex ovato-conicus v. linearis, sæpe angulatus v. sulcatus, stigmate parvo terminali v. obliquo; ovulum 1, lateraliter medium versus v. prope basin affixum, plus minus amphitropum. Fructus siccus, ovoideus v. globosus, perianthio styloque deciduis sæpius nudus, epicarpio membranaceo, endocarpio crustaceo.—Frutices v. arbusculæ. Folia alterna, sæpius crebra, coriacea, integerrima v. apicem versus paucidentata. Flores sub quaque bractea solitarii, sessiles, majusculi v. mediocres, capitati, capitulis terminalibus dense globosis v. rarius oblongis, receptaculo plano v. longiuscule elevato. Bracteæ exteriores vacuæ, squamiformes, imbricatæ, post anthesin deciduæ v. in fructu persistentes strobilinæ, interiores inter flores angustæ. Perianthia sæpius villosa.

Species ad 24, Africæ australis incolæ. *Meisn. in DC. Prod.* xiv. 253. *Andr. Bot. Rep. t.* 17, 294 (*Protea*). *Trattin. Thes. Bot. t.* 10, quibus addenda forte species Abyssinica non satis nota, *L. Rochetianum*, A. Rich. in Ann. Sc. Nat. ser. 3. xv. 369, pluribus notis ex descr. *Proteæ* affinior.

5. **Faurea,** *Harv. in Hook. Lond. Journ.* vi. 373, *t.* 15.—Flores hermaphroditi, irregulares. Perianthium lineari-clavatum v. incurvum, basi latius, limbo oblongo obliquo, segmento postico per anthesin fere a basi soluto, 3 inferioribus fere ad apicem in labium demum revolutum connatis. Antheræ in limbo subsessiles, lineares, connectivo obtuso breviter apiculatæ. Squamulæ hypogynæ 4, lanceolato-subulatæ, erectæ, sub fructu induratæ stellato-patentes. Ovarium longe denseque pilosum; stylus a basi angulato-sulcatus, apice vix incrassatus, stigmate parvo terminali; ovulum 1, medio lateraliter affixum. Nux compressiuscula, dense barbata. Semen orbiculatum.—Arbores parvæ v. mediocres, speciosæ. Folia alterna, petiolata, integerrima, nitida, glabra v. subtus tomentosa. Flores sub quaque bractea solitarii, sessiles, dense spicati, spica terminali cylindracea post perianthia delapsa ovariis pilosis dense plumosa. Rhachis cum receptaculis elevato-disciformibus post fructus delapsus diu persistens. Bracteæ caducissimæ v. 0.

Species adsunt 7. Africæ australis tropicæ et extratropicæ et Madagascariæ incolæ. *Meisn. in DC. Prod.* xiv. 344. *Welw. in Trans. Linn. Soc.* xxvii. 63, *t.* 20. Flores et fructus omnino *Proteæ* a qua *Faurea* differt imprimis spicis elongatis ebracteatis.

6. **Serruria,** *Salisb. Parad. Lond. sub t.* 67, *et in Knight, Prot.* 78.—Flores hermaphroditi, subregulares. Perianthium angustum, sæpius incurvum, limbo ovoideo v. oblongo, segmentis per anthesin alte solutis ima basi cohærentibus. Antheræ in laminis subsessiles, oblongæ v. lineares, connectivo brevissime producto apiculatæ v. muticæ. Squamæ

hypogynæ 4, lineares v. filiformes. Ovarium subsessile, villosum v. setoso-hispidum; styli apex cylindraceus vix dilatatus, stigmate terminali truncato; ovulum 1, lateraliter medio v. supra medium affixum. Nux ovoidea v. ovoideo-globosa, styli basi rostrata v. stylo deciduo nuda.—Frutices dense foliati. Folia sparsa, angustissime 3-fida pinnatifida v. magis dissecta, rarius hinc inde indivisa. Flores sub quaque bractea solitarii, sessiles, dense capitati, bracteis vacuis imbricatis involucrati, capitulis ad apices ramorum nunc solitariis sessilibus v. pedunculatis, nunc ∞ corymbosis v. in capitulum compositum congestis.

Species enumeratæ 52, Africæ australis incolæ, plurimæ tamen inter se nimis affines. *Meissn. in DC. Prod.* xiv. 284. *Andr. Bot. Rep. t.* 264, 337, 349, 447, 507, 512, 522, 536, 545 (*Protea*).

7. **Mimetes,** *Salisb. Parad. Lond. sub n.* 67, *et in Knight, Prot.* 64.—Flores hermaphroditi, regulares. Perianthium tenue, rectum v. curvulum, limbo recto oblongo v. vix tubo latiore, segmentis per anthesin solutis v. ima basi breviter connatis. Antheræ in laminis subsessiles, oblongæ v. lineares, connectivo breviter appendiculatæ v. nudæ. Squamulæ hypogynæ 4, lineares. Ovarium glabrum v. parce pilosum; styli apex vix incrassatus, stigmate parvo terminali v. obliquo; ovulum 1, lateraliter v. fere ad apicem affixum, plus minus amphitropum. Nux sessilis, ovoidea, glabra, pericarpio membranaceo v. leviter indurato.—Frutices. Folia sparsa, sub quaque bractea solitarii, sessiles, integerrima v. rarius apice dentata. Flores capitati, capitulis sessilibus bracteis membranaceis involucratis.

Species 14, Africæ australis incolæ. *Meissn. in DC. Prod.* xiv. 262. Genus in sectiones 2 ad inflorescentiam dividitur:—

1. *Eumimetes*, Endl. Capitula sæpe pauciflora, in axillis superioribus sessilia. Involucri squamæ membranaceæ, sæpius appressæ. Folia plana, coriacea.—*Reichb. Iconogr. Exot. t.* 92, 93. OROTHAMNUS, *Pappe ex Hook. Bot. Mag. t.* 4357 (ic. in *Fl. des Serres t.* 338 repetita) ab *Eumimete* non differt nisi capitulis paucioribus nec vere terminalibus, involucri bracteis magis patentibus amplis coloratis.

2. *Pseudomimetes*, Endl. Capitula terminalia, multiflora, parvula, subglobosa, inter folia summa sessilia. Fruticuli diffusi v. divaricato-ramosi, ericoidei, foliis parvulis. Huc pertinent *Diastellæ* species nonnullæ, *Salisb. in Knight, Prot.* 69.

8. **Sorocephalus,** *R. Br. in Trans. Linn Soc.* x. 139. (Soranthe, *Salisb. in Knight, Prot.* 71.)—Flores hermaphroditi, regulares. Perianthium tenue, ima basi latius, limbo parvo recto globoso v. oblongo, segmentis per anthesin alte solutis cum laminis revolutis, ima basi cohærentibus. Antheræ in laminis subsessiles, oblongæ. Squamulæ hypogynæ 4, lineari-filiformes. Styli apex parum incrassatus, breviter oblongus, rectus v. obliquus, stigmate parvo terminali v. obliquo; ovulum 1, lateraliter affixum, amphitropum. Nux ovoidea v. oblonga, pericarpio basin versus indurato a stipite brevi crasso v. a basi pericarpii brevissime persistente deciduo.—Frutices erecti v. rarius diffusi, ericoidei, dense foliati. Folia sparsa, conferta v. fere imbricata, lanceolata v. angusta, interdum subulata, integra v. inferiora dissecta. Florum capitula parva, pauci- (1–6-)flora, bracteis totidem parvis involucrata, in spicas breves densas capitatas v. dense corymbosas conferta. Bracteæ capitula subtendentia breves, membranaceæ v. demum auctæ latæ imbricatæque, capitulo composito subgloboso strobilum *Leucadendri* simulante.

Species ad 10, Africæ australis incolæ. *Meissn. in DC. Prod.* xiv. 303. *Andr. Bot. Rep. t.* 517 (*Protea*).

Genus in sectiones 2 dividitur: *Mischocaryon*, Endl., nuce basi integra, pericarpio toto a stipite deciduo; et *Cardiocaryon*, Endl., nuce delapsa basi emarginata, pericarpii basin brevissime persistentem relinquente.

9. **Nivenia,** *R. Br. in Trans. Linn. Soc.* x. 133. (Paranomus, *Salisb. Parad. Lond. sub n.* 67, *et in Knight, Prot.* 67.)—Flores hermaphroditi, regulares. Perianthium tenue, ima basi latius, limbo parvulo globoso v. oblongo nunc vix tubo latiore, segmentis per anthesin alte solutis revolutis ima basi cohærentibus. Antheræ in laminis subsessiles, lineares v. oblongæ, connectivo brevissime apiculatæ v. nudæ. Squamæ hypogynæ 4, lineares. Ovarium subsessile, glabrum v. pilosum; styli apex sæpius parum incrassatus,

cylindraceus v. oblongus, sulcatus, stigmate parvo terminali; ovulum 1, lateraliter affixum, plus minus amphitropum. Nux ovoidea v. oblonga, subteres, basi non dilatata, styli basi appendiculata v. nuda.—Frutices erecti, foliosi. Folia conferta, sparsa, coriacea, nunc parvula lata et integerrima, nunc etiam in eodem ramulo angusta, more *Serruriæ* divisa v. dissecta. Flores sub quaque bractea solitarii, sessiles, capitati, capitulis 4-floris bracteis totidem involucratis, intra bracteam subtendentem sessilibus, in spicam terminalem oblongam cylindraceam v. subglobosam confertis. In spica fructifera sæpius rufo-pilosa, bracteæ persistentes interdum auctæ fructum includentes.

Species 12, Africæ australis incolæ. *Meisn. in DC. Prod.* xiv. 299. *Andr. Bot. Rep. t.* 234, 243 (*Protea*).

N. parvifolia, Br., ab omnibus differt styli apice breviter conico, nec anguste oblongo.

10. **Spatalla**, *Salisb. Parad. Lond. sub n.* 67, *et in Knight, Prot.* 73.—Flores hermaphroditi, parum irregulares. Perianthium tenue, ima basi parum dilatatum, limbo recto v. incurvo ovoideo v. oblongo, segmentis per anthesin alte solutis recurvis basi breviter cohærentibus, superiore sæpe cæteris paullo latiore. Antheræ in lamina subsessiles, ovatæ v. oblongæ, superiore cæteris sæpe majore et interdum sola pollinifera. Squamæ hypogynæ 4, subulatæ. Ovarium sessile v. brevissime stipitatum; styli apex brevis nunc brevissimus, oblique oblongus clavatus v. subdisciformis, stigmate valde obliquo v. laterali v. in medio disco; ovulum 1, lateraliter affixum, plus minus amphitropum. Nux brevissime stipitata, ovoidea.—Frutices ericoidei. Folia sparsa, filiformia v. subulata, indivisa. Flores parvuli, sub quaque bractea solitarii, capitati, capitulis 1-4-floris bracteis totidem parvulis involucratis, in spicam laxiusculam v. racemum terminalem dispositis, sessilibus v. breviter pedicellatis. Nuces sæpius pubescentes v. villosæ, involucrum superantes v. breviores, bracteis involucri sub fructu interdum varie connatis.

Species descriptæ 17, Africæ australis incolæ. *Meisn. in DC. Prod.* xiv. 306. Species plures quoad folia et habitus vix distinguendæ, sed styli apicis forma characteres certiores præbere videtur.

11. **Petrophila**, *R. Br. in Trans. Linn. Soc.* x. 67.—Flores hermaphroditi, regulares. Perianthium tenue, rectum v. curvulum, limbo angusto, segmentis per anthesin ad medium v. usque ad basin solutis superne recurvis. Antheræ in laminis sessiles, lineares v. oblongæ, connectivo breviter producto appendiculatæ. Squamæ hypogynæ 0. Ovarium sessile; stylus superne sæpe dilatatus v. truncatus, sub apice fusiformi hispido v. papilloso glaber, stigmate terminali parvo; ovulum 1, prope apicem lateraliter affixum, plus minus amphitropum, addito rarius ovulo secundo abortivo. Nux sæpius compressa, interdum margine alata, pilis longis ad margines v. basin connata.—Frutices. Folia sparsa, coriacea, integerrima v. divisa, sæpius teretia v. angusta. Flores sub quaque bractea solitarii, sessiles, dense capitati v. spicati, capitulis terminalibus v. rarius axillaribus strobilinis globosis ovoideis v. rarius cylindraceis, receptaculo seu rhachi lanato sæpius cylindraceo, squamis imbricatis post anthesin induratis persistentibus; bracteæ sub capitulo sæpius ∞, membranaceæ, coloratæ, involucrum persistens v. deciduum formantes.

Species 35, omnes Australianæ. *Benth. Fl. Austral.* v. 319. *F. Muell. Fragm. Phyt. Austral.* x. 47, 61. *Cav. Ic. t.* 550, 551 (*Protea*). *Guillem. Ic. Pl. Austral. t.* 18. *Bot. Mag. t.* 796 (*Protea*), 3469.

Genus in Fl. Austral. l. c. in sectiones 6 dividitur, ad characteres imprimis e foliorum et styli apicis formas deductas, quæ tamen haud magni valoris apparent.

Atylus, *Salisb. Parad. Lond.* sub t. 67, includit *Petrophilam* et *Isopogonem*, R. Br.

12. **Isopogon**, *R. Br. in Trans. Linn. Soc.* x. 71.—Flores hermaphroditi, regulares. Perianthium tenue, nunc tenuissimum, post anthesin circumscissum, parte superiore decidua 4-fida, segmentis linearibus, laminis linearibus v. oblongis; pars inferior diu persistens, in fructu fissa v. demum rejecta. Antheræ in laminis sessiles, connectivo brevi apiculatæ. Squamæ hypogynæ 0. Ovarium sessile; stylus superne sæpius dilatatus v. clavatus, ab apice scopiformi reflexo-hispido strictura sæpius separatus, v. rarius stylus

usque ad apicem continuus tenuisque; stigma parvum, terminale; ovulum 1, juxta apicem lateraliter affixum. Nux undique hirsuta v. longe comosa, ovoideo-conica, vix compressa, nec alata.—Frutices habitu *Petrophilæ.* Folia sparsa, rigide coriacea, integra v. divisa, teretia v. plana interdumque latiuscula. Flores sub quaque bractea solitarii, sessiles, dense capitati v. spicati, capitulis terminalibus v. rarius axillaribus strobilinis globosis v. ovoideis, receptaculo v. rhachi brevi v. elongato lanato; squamæ imbricatæ, post anthesin v. cum seminibus deciduæ; bracteæ sub capitulo involucrantes diutius persistentes, et foliis caulinis summis arcte cinctæ.

Species 29, omnes Australianæ. *Benth. Fl. Austral.* v. 336.

Genus in sectiones 2 dividitur:—

1. *Hypsanthus*, strobili squamis acuminatis laxe imbricatis, interioribus angustis. Receptaculum planum convexum v. rarius oblongum. *Guillem. Ic. Pl. Austral. t.* 19. *Hook. Ic. Pl. t.* 438. *Bot. Mag. t.* 3539, 4037, 4332, 4372.

2. *Eustrobus*, strobili squamis apice dilatatis v. truncatis, post anthesin arcte imbricatis. Receptaculum convexum conicum v. cylindraceum. *Cav. Ic. t.* 548, 549. *Andr. Bot. Rep. t.* 332, 465. *Bot. Mag. t.* 697 (*omnes sub Protea*). *Bot. Reg. t.* 900, 1288. *Lodd. Bot. Cab. t.* 1337, 1883.

13. **Adenanthos,** *Labill. Pl. Nov. Holl.* i. 28, *t.* 36 *ad* 38.—Flores hermaphroditi, regulares v. parum irregulares. Perianthii curvuli tubus tenuis v. basin versus amplior, antice sæpius fissus, fere totus deciduus, limbo parum latiore, laminis æqualibus; pars inferior persistens, brevissime annularis. Antheræ in laminis sessiles, æquales v. antica effœta longior, connectivo brevi apiculatæ. Squamæ hypogynæ 4, glanduliformes, perianthii basi annulatæ adnatæ eamque superantes. Ovarium sessile; stylus elongatus, diu arcuatus et e fissura perianthii protrusus, demum erectus et perianthio longior, superne sub apice clavato v. dilatato attenuatus, stigmate in sulco antico descendente; ovulum 1, lateraliter affixum, amphitropum. Nux (rarius drupa?) parva, glabra v. parce pilosa, indehiscens.—Frutices v. arbusculæ. Folia sparsa integra v. divisa, plana v. teretia, rarius rigide pungentia. Flores in involucro e bracteis 4–8 sæpius 6 imbricatis sessiles, solitarii, involucris axillaribus v. terminalibus sessilibus v. breviter pedunculatis solitariis v. fasciculatis. Perianthium extus pubescens v. villosum, laminis sæpius intus pone antheram barbatis. Ovarium annulo pilorum cinctum.

Species 15. Australiæ occidentalis extratropicæ incolæ. *Benth. Fl. Austral.* v. 350. *Endl. Iconogr. t.* 110. *F. Muell. Fragm. Phyt. Austral.* viii. 149.

14. **Stirlingia,** *Endl. Gen.* 339 *et Suppl.* iv. ii. 81; *Iconogr. t.* 23. (Simsia, *R. Br. in Trans. Linn. Soc.* x. 152, *non Pers.*)—Flores hermaphroditi v. abortu masculi, subregulares. Perianthii curvuli tubus oblongo-cylindraceus, superne angustior, limbo recto paullo latiore; segmenta per anthesin soluta, superne recurva. Stamina sub basi laminarum affixa, filamentis brevibus crassis; antheræ primum in cylindrum circa stylum cohærentes, loculis cujusve antheræ connectivo lato separatis, cum loculo antheræ contiguæ in unum confluentibus, demum solutæ cum segmento recurvæ. Squamæ hypogynæ 0. Ovarium sessile; stylus filiformis, stigmate terminali obtuso v. peltato-dilatato; ovulum 1, anatropum, a basi erectum. Nux parva, indehiscens, obovoidea v. obconica, apice truncata v. convexa, undique hirsuta, pilis superioribus in comam elongatis.—Suffrutices fruticesve sæpius glabri. Folia sparsa dissecta segmentis trichotomis, v. rarius trifida. Flores parvi, in spicas globosas conferti, sub quaque bractea solitarii, sessiles, spicis in pedunculo longo solitariis paniculatisve.

Species 5, Australiæ occidentalis extratropicæ incolæ. *Benth. Fl. Austral.* v. 356.

Tribus II. Conospermeæ.

15. **Synaphea,** *R. Br. in Trans. Linn. Soc.* x. 155; *App. Flind. Voy. t.* 7.—Flores hermaphroditi, irregulares. Perianthium obliquum v. incurvum subclavatum, tubo brevi; limbus latior obovoideus; segmenta per anthesin soluta, postici lamina erecta ovata v. oblonga, cæteræ 3 sæpius breviora magisque patentia. Stamina ad basin laminarum

affixa, filamentis brevibus; anthera antica distincte 2-locularis, laterales dimidiatim 1-loculares, loculo cum contiguo antheræ anticæ in loculum unicum confluente, per anthesin tamen soluto; anthera postica abortiva v. in membranam filamentum cum stigmate connectentem mutata. Squamæ hypogynæ 0. Ovarium stipitatum v. subsessile, fasciculo pilorum coronatum; stylus filiformis, apice in discum obliquum stigmatiferum perianthii laminam posticam spectantem dilatatus, margine antico sæpe 2-lobo v. 2-cornuto; ovulum 1, lateraliter affixum, amphitropum. Nux parva, indehiscens.—Frutices suffruticesve. Folia sparsa, omnia v. saltem inferiora longe petiolata, petiolo basi dilatata squamiformi, lamina coriacea integra v. divisa, minute reticulata. Flores parvi, sub quaque bractea solitarii, sessiles, spicati, spicis primum densis demum elongatis, pedunculo communi simplici v. ramoso, ad axillam squamæ vaginantis oriundo.

Species 8, Australiæ occidentalis extratropicæ incolæ. *Benth. Fl. Austral.* v. 359. *Endl. Iconogr. t.* 32.

16. **Conospermum,** *Sm. in Trans. Linn. Soc.* iv. 213; *Exot. Bot. t.* 82.—Flores hermaphroditi, plus minus irregulares. Perianthii tubus rectus v. leviter incurvus, indivisus, limbo nunc angusto, lobis 4 subæqualibus patentibus, nunc ovoideo v. oblongo bilabiato, labio postico lato concavo, antico anguste 3-lobo. Stamina ad apicem gibbosum tubi v. ad basin laminæ concavæ affixa, filamentis brevibus crassis; anthera postica 2-locularis, laterales loculo 1 perfecto 1 effœto, antica loculis 2 effœtis, loculi fertiles lateralium cum loculo contiguo posticæ ante anthesin in unum cohærentes, per anthesin soluti. Squamæ hypogynæ 0. Ovarium sessile, obconicum, apice pilis longis coronatum; stylus basi filiformis, juxta basin antherarum incrassatus et incurvus, rostro oblongo v. angusto terminatus, stigmate ad apicem laterali per anthesin elastice in labium anticum perianthii recurvo; ovulum 1, ab apice pendulum, orthotropum. Nux parva, obconica v. turbinata, vertice plano v. concavo coma pilorum coronato.—Frutices suffruticesve. Folia sparsa, integerrima. Flores spicati, ad axillas bractearum vaginantium solitarii, sessiles, spicis brevibus densis in capitula sessilia congestis v. in axillis solitariis sessilibus, v. varie paniculatis, rhachi post anthesin interdum elongata. Bracteæ latæ, persistentes.

Species 34, omnes Australianæ extratropicæ, pleræque occidentales. *Benth. Fl. Austral.* v. 363. *F. Muell. Fragm.* x. 20. In sectiones 2 distribuuntur:—

1. *Isomerum*, R. Br. Perianthii lobi tubo æquilongi v. longiores, subæquales, patentes. Antheræ intra gibbum ad apicem tubi collocatæ.—*Endl. Iconogr. t.* 46.

2. *Euconospermum*, Endl. Perianthii limbus 2-labiatus, tubo æquilongus v. brevior, labio postico latissimo concavo antheras fovente, antico anguste 3-lobo.—*Rudge in Trans. Linn. Soc.* x. *t.* 17. *Endl. Iconogr. t.* 31. *F. Muell. Pl. Vict. t.* 70. *Bot. Mag. t.* 2724, 2850.

Tribus III. Franklandieæ.

17. **Franklandia,** *R. Br. in Trans. Linn. Soc.* x. 157; *App. Flind. Voy. t.* 6.—Flores hermaphroditi, regulares. Perianthii tubus longus, indivisus, angustus, rectus, limbo vix latiore, lobis æqualibus per anthesin patentibus. Antheræ lineares, inclusæ, tubo adnatæ. Squamæ perigynæ 4, lineares, infra medium tubi affixæ, in annulum circa stylum cohærentes, demum solutæ erectæ. Ovarium sessile, annulo pilorum longorum v. setis 3 plumosis coronatum; stylus filiformis, stigmate terminali dilatato; ovulum 1, ab apice pendulum, orthotropum. Nux angusta, coma pappiformi v. setis 3 plumosis coronata. Embryonis cotyledones radicula multo breviores.—Frutices. Folia sparsa, dichotome divisa, segmentis teretibus. Flores longi, flavi, racemosi, sub quaque bractea solitarii, racemis terminalibus v. in axillis superioribus. Bracteæ parvæ.

Species 2, Australiæ occidentalis extratropicæ incolæ. *Benth. Fl. Austral.* v. 376. *Endl. Iconogr. t.* 52.

Tribus IV. Persoonieæ.

18. **Symphyonema,** *R. Br. in Trans. Linn. Soc.* x. 157.—Flores hermaphroditi, regulares. Perianthium cylindraceum, rectum, limbo vix latiore, segmentis per anthesin

superne solutis. Stamina prope basin segmentorum affixa, filamentis basi liberis incurvis sub antheris circa stylum cohærentibus; antheræ liberæ, erectæ, connectivo brevissime apiculatæ. Squamæ hypogynæ 0. Ovarium breviter stipitatum; stylus filiformis, stigmate terminali capitato v. leviter dilatato; ovula 2, pendula, orthotropa. Nux oblonga, indehiscens, sæpius 1-sperma.—Suffrutices v. herbæ perennes. Folia sparsa v. inferiora opposita, dissecta, segmentis trichotomis angustis. Flores parvi, flavescentes, tenuiter spicati, sub quaque bractea solitarii, sessiles.

Species 2, Australiæ orientalis extratropicæ incolæ. *Benth. Fl. Austral.* v. 377. *Endl. Iconogr.* t. 12. *Reichb. Iconogr. Exot.* t. 107.

19. **Bellendena,** *R. Br. in Trans. Linn. Soc.* x. 166.—Flores hermaphroditi, regulares. Perianthium cylindraceo-clavatum, rectum, segmentis basi contractis per anthesin solutis patentibus. Stamina ad basin segmentorum subhypogyna, filamentis erectis; antheræ oblongæ, muticæ. Squamæ hypogynæ 0. Ovarium breviter stipitatum, in stylum brevem crassum attenuatum, stigmate terminali; ovula 2, pendula, orthotropa. Fructus membranaceus, plano-compressus, indehiscens, ala angustissima cinctus, stylo in marginem reflexo. Semen sæpius abortu unicum, plano-compressum.—Frutex. Folia sparsa, integra v. apice dentata. Flores parvi, dense racemosi, secus rhachin sparsi, racemo terminali pedunculato. Bracteæ 0.

Species 1, Tasmanica. *Benth. Fl. Austral.* v. 378. *Guillem. Ic. Pl. Austral.* t. 7.

20. **Agastachys,** *R. Br. in Trans. Linn. Soc.* x. 158.—Flores hermaphroditi, regulares. Perianthium cylindraceo-clavatum, curvulum, segmentis basi contractis per anthesin solutis recurvis. Stamina infra medium segmentorum affixa, filamentis brevibus; antheræ oblongæ, connectivo breviter acuminatæ. Squamæ hypogynæ 0. Ovarium sessile, trigonum; stylus brevis, stigmate oblongo crasso obliquo sublaterali; ovulum 1, lateraliter sub apice affixum, amphitropum, descendens. Fructus (adhuc immaturus) siccus, indehiscens, 3-alatus, alis 2 lateralibus latis, antica angusta.—Frutex. Folia sparsa, integra, conferta. Flores albi, spicati, sub quaque bractea solitarii, sessiles, spicis elongatis axillaribus.

Species 1, Tasmanica. *Benth. Fl. Austral.* v. 379, *et in Hook. Ic. Pl.* t. 1266. Fructum perfecte maturum non vidimus.

21. **Beauprea,** *Brongn. et Gris in Bull. Soc. Bot. Fr.* xviii. 243, *in Ann. Sc. Nat. ser.* 5, xiii. 365, *et in Nouv. Arch. Mus. Par.* vii. t. 17.—Flores hermaphroditi, regulares. Perianthium oblongo-cylindraceum, rectum, limbo vix latiore, segmentis per anthesin solutis, recurvis. Stamina prope basin segmentorum affixa, filamentis planis; antheræ oblongæ, connectivo breviter mucronatæ v. muticæ. Squamæ hypogynæ 4, liberæ, breves. Ovarium sessile, postice plus minus gibbosum; stylus elongatus, filiformis, stigmate terminali; ovulum 1, semianatropum, ascendens. Drupa ellipsoidea obovata v. orbicularis, basi styli prope fructus insertionem apiculata. Semen lateraliter affixum. —Frutices. Folia alterna, petiolata, indivisa v. imparipinnata. Flores parvi, spicati v. subracemosi sub quaque bractea solitarii, spicis racemisve ad apices ramorum paniculatis.

Species 5, Novo-Caledonicæ. Genus *Cenarrheni* valde affine, differt ovulo ascendente, ovario post anthesin postice tantum accreto, stylo primum terminali demum fere basilari.

22? **Dilobeia,** *Thou. Nov. Gen. Madag.* 7.—Flores dioici? regulares. Perianthium oblongo-cylindraceum, limbo vix latiore, segmentis demum solutis. Stamina prope basin segmentorum affixa, filamentis planis; antheræ oblongæ, connectivo breviter mucronatæ. Ovarium in fl. ♂ effœtum; stylus lineari-compressus. Fl. ♀ . . . Fructus . . .—Arbor. Folia alterna, petiolata, ampla, alte 2-loba, costa inter lobos in glandulam producta. Flores parvi, spicati, in quaque bractea solitarii, spicis in axillis superioribus ample paniculatis.

Species 1, Madagascariensis. *Baill. Adansonia* ix. 243. Ex exemplare in herb. Mus. Par. servato

a Baillono examinato affinis videtur *Beaupreæ*, sed flores fere omnes jam delapsi, et ovario fructuque ignotis locus in systemate valde incertus.

23. **Cenarrhenes,** *Labill. Pl. Nov. Holl.* i. 36, *t.* 50.—Flores hermaphroditi, regulares. Perianthium in alabastro ovoideum v. oblongo-cylindraceum, rectum, obtusum v. acuminatum, limbo vix latiore, segmentis per anthesin solutis patentibus. Stamina prope basin segmentorum affixa, filamentis tenuibus v. latis; antheræ oblongæ, connectivo acuminatæ v. muticæ. Squamæ hypogynæ 4, glanduliformes v. obovatæ. Ovarium sessile; stylus filiformis, apice vix incrassatus, stigmate terminali parvo v. stylo latiore; ovulum 1, pendulum, orthotropum. Drupa oblique ovoidea v. globosa, sæpius compressa styli cicatrice terminata, exocarpio succoso, endocarpio duro indehiscente.—Frutices v. arbores. Folia alterna, coriacea, siccitate nigricantia, integerrima grosse dentata v. pinnatifida. Flores spicati, parvuli, sub quaque bractea solitarii, spicis laxis sæpe elongatis axillaribus simplicibusque.

Species 1, Tasmanica, *Benth. Fl. Austral.* v. 380. Species Novo-Caledonicæ a Brongn. et Gris in Ann. Sc. Nat. ser. 5. iii. 203 descriptæ ab auctoribus ipsis serius rite exclusæ, *C. spathulæfolia* ad *Garnieriam*, *C. paniculata* ad *Beaupream* relatis.

24. **Garnieria,** *Brongn. et Gris in Bull. Soc. Bot. Fr.* xviii. 189, *in Ann. Sc. Nat. ser.* 5, xiii. 370, *et in Nouv. Arch. Mus. Par.* vii. *t.* 18.—Flores hermaphroditi, regulares? Perianthium . . . Stamina . . . Squamæ hypogynæ 4, parvæ, lineares, distantes. Ovarium subsessile, carnosum, in stylum brevem attenuatum, stigmate terminali truncato; ovula ∞, apice affixa, orthotropa, 2-seriatim horizontalia v. pendula. Fructus sessilis, durissimus, indehiscens, oblique orbicularis, compressus, endocarpio intus inter semina producto in locellos plures divisus. Semina in loculis solitaria, abortu pauca, deorsum producta in alam membranaceam.—Frutex ramulis novellis inflorescentiaque ferrugineo-pubescentibus, cæterum glaber. Folia sparsa, anguste spathulata, integerrima, coriacea. Flores laxe spicati, sub quaque bractea solitarii, sessiles, spicis axillaribus brevibus simplicibus v. subramosis.

Species 1, Novo-Caledonica, inter *Persoonieas* ovulis ∞ insignis.

25. **Persoonia,** *Sm. in Trans. Linn. Soc.* iv. 215; *Exot. Bot. t.* 83. (Linkia, *Cav. Ic.* iv. 61, *t.* 389. Pentadactylon, *Gærtn. f. Fruct.* iii. 219, *t.* 220.)—Flores hermaphroditi, regulares. Perianthium cylindraceum v. supra basin constrictum, rectum, segmentis per anthesin a basi solutis v. ima basi cohærentibus superne revolutis, laminis vix latioribus. Stamina infra medium segmentorum affixa, filamentis brevibus; antheræ oblongæ v. lineares, connectivo ultra loculos producto apiculatæ v. nudæ, una rarissime effœta. Squamulæ v. glandulæ hypogynæ 4, sæpius parvæ. Ovarium breviter v. longiuscule stipitatum; stylus brevis crassusque v. elongatus et tenuis, stigmate terminali; ovula 2 v. rarius 1, ab apice loculi pendula, orthotropa, funiculis inæqualibus vix collateralia. Drupa 1-locularis 1-sperma, v. oblique 2-locularis 2-sperma, exocarpio succoso, endocarpio crasso durissimo.—Frutices v. arbusculæ. Folia integerrima, alterna v. hinc inde subverticillata. Flores parvuli v. mediocres, flavi v. albi, ad axillas solitarii v. foliis floralibus abortivis ad apices ramorum breviter racemosi, rarius in racemos terminales secundos dispositi.

Species 60, una Novo-Zelandica, cæteræ omnes Australianæ. *Benth. Fl. Austral.* v. 380. *Hook. f. Handb. N. Zeal. Fl.* 241. *F. Muell. Fragm. Phytogr. Austral.* x. 46.

Genus in sectiones sequentes dividitur:—

1. *Pycnostylis*, Meissn. Stylus brevis, sæpe ovario non tenuior, incurvus v. apice hamatus, stigmate in cavernula segmenti superioris infra antheram immerso.

2. *Acranthera*. Stylus ultra antheras productus, stigmate terminali recto. Antheræ connectivo appendiculatæ.—*Hook. Ic. Pl. t.* 425.

3. *Amblyanthera*. Stylus ultra antheras productus, stigmate terminali recto. Antherarum connectivum ultra loculos non productum. *Rudge in Trans. Linn. Soc.* x. *t.* 16. *Labill. Pl. Nov. Holl. t.*

45. *Vent. Jard. Malm. t.* 32. *Hook. Ic. Pl. t.* 426. *F. Muell. Pl. Vict. t.* 69. *Andr. Bot. Rep. t.* 74, 280. *Bot. Mag. t.* 760. *Lodd. Bot. Cab. t.* 25, 327, 922, 1199, 1509.

26. **Brabeium,** *Linn. Gen. n.* 160. (Brabyla, *Linn. Mant.* 137.)—Flores abortu polygami, regulares. Perianthium angustum, rectum, segmentis per anthesin a basi solutis laminis vix dilatatis. Stamina basi segmentorum affixa, iis parum breviora, filamentis filiformibus; antheræ oblongæ, connectivo obtuso vix apiculatæ. Discus hypogynus membranaceus, breviter cupulatus. Ovarium sessile, villosum; stylus superne etiam in fl. ♂ leviter incrassatus sulcatusque, stigmate in fl. ☿ parvo terminali; ovula 2 v. 1, ab apice loculi pendula, orthotropa. Drupa ovoidea, subcompressa, dense velutina, exocarpio suberoso, endocarpio lignoso. Semen abortu solitarium; cotyledones crassissimæ, duræ. —Arbor. Folia verticillata, coriacea, indivisa, dentata. Flores parvi, racemosi, secus rhachin fasciculati, breviter pedicellati, racemis axillaribus densis spiciformibus. Bracteæ ante anthesin pluriseriatim imbricatæ, per anthesin deciduæ.

Species 1, Africæ australis incola. *Meissn. in DC. Prod.* xiv. 344. *Lam. Illustr. t.* 847. *Gærtn. f. Fruct.* iii. *t.* 217.

TRIBUS V. GREVILLEEÆ.

27. **Panopsis,** *Salisb. in Knight, Prot.* 104. (Andriapetalum, *Pohl, Pl. Bras. Ic.* i. 113, *t.* 91, 92.)—Flores hermaphroditi, regulares. Perianthium cylindraceum, tenue, rectum, limbo parvo subgloboso, segmentis per anthesin solutis superne revolutis. Stamina infra medium segmentorum affixa, filamentis sæpius complanatis; antheræ oblongæ, connectivo apiculatæ. Squamulæ hypogynæ 4, tenuissime membranaceæ, basi v. fere ad apicem in cupulam connatæ. Ovarium subsessile, hirtum; styli apex sæpius incrassatus, oblongus, sulcatus, stigmate parvo terminali v. majore obliquo; ovula 2, collateralia, ab apice loculi pendula, orthotropa. Fructus ovoideus v. subglobosus, indehiscens (v. tardius bipartibilis?), pericarpio crasso suberoso sæpius exsucco. Semen abortu solitarium, globosum v. oblongum, exalatum.—Arbores. Folia alterna v. subverticillata, integerrima, coriacea, venosa. Flores geminatim v. fasciculatim pedicellati, in racemos axillares terminalesve dispositi. Bracteæ minutæ v. 0.

Species editæ 8, Americæ australis tropicæ incolæ. *Meissn. in DC. Prod.* xiv. 345 (*Andriapetalum*). *H. B. et K. Nov. Gen. et Sp. t.* 121 (*Rhopala*). *Rudge, Pl. Gui t.* 31 (*Ropala*). Genus characteribus *Persoonieis* accedit, habitu et inflorescentia *Roupalæ* propinquius.

28. **Euplassa,** *Salisb. in Knight, Prot.* 101. (Adenostephanus, *Klotzsch in Linnæa,* xv. 51. Dicneckeria, *Vell. Fl. Flum.* 41; *Ic.* i. t. 105.)—Flores hermaphroditi, parum irregulares. Perianthii tubus obliquus, basi parum dilatatus; limbus parvus, subglobosus, rectus v. recurvus, segmentis per anthesin solutis, laminis concavis. Antheræ in laminis subsessiles, ovatæ v. oblongæ, connectivo latiusculo ultra loculos distinctos breviter producto. Glandulæ hypogynæ 4, stipiti brevi ovarii adnatæ, æquales v. posticæ paullo majores. Ovarium villosulum; styli apex incurvo-clavatus, stigmate terminali obliquo; ovula 2, collateralia, pendula, summo vertice v. juxta apicem affixa, orthotropa. Fructus (ubi notus) oblique subglobosus, compressiusculus, indehiscens (v. tardius hinc fissus?), pericarpio carnoso. Semina 2, suborbicularia, compressa, exalata, pendula.—Arbores. Folia alterna, ampla, pinnata, foliolis petiolulatis coriaceis integerrimis v. dentatis. Flores geminatim pedicellati, in racemos axillares v. ad apices ramorum paniculatos dispositi. Bracteæ minutæ v. 0.

Species editæ 8, Guianæ et Brasiliæ incolæ. *Meissn. in DC. Prod.* xiv. 436, *et in Mart. Fl. Bras* v. i. 92, *t.* 34 *ad* 36 (*Adenostephanus*). *Rudge, Pl. Gui. t.* 38 (*Ropala*). *Pohl, Fl. Bras. Ic. t.* 89 (*Rhopala*).

29. **Guevina,** *Molina ex Juss. Gen.* 424. (Quadria, *Ruiz et Pav. Fl. Per. et Chil. Prod.* 16, *t.* 33; *et Fl.* i. 63, *t.* 99.)— Flores hermaphroditi, subregulares. Perianthii tubus cylindraceus; limbus ovoideus, recurvus, segmentis per anthesin a basi solutis. Antheræ

in laminis concavis subsessiles, ovato-oblongæ, connectivo obtuso brevissime apiculatæ. Discus hypogynus unilateralis, semiannulatus, carnosus, breviter 2-lobus. Ovarium subsessile, angustum; styli apex ovoideus subclavatus, stigmate terminali obliquo lato; ovula 2, ab apice loculi pendula, collateralia, orthotropa. Fructus ovoideo-globosus, indehiscens, pericarpio duro subereso subcarnoso. Semen abortu sæpius unicum, subglobosum, testa subcrustacea.—Arbor. Folia alterna, imparipinnata, foliolis dentatis. Flores geminatim pedicellati, in racemos longiusculos axillares dispositi. Bracteæ minutæ caducæ v. 0.

Species 1, Chilensis. *Meisn. in DC. Prod.* xiv. 347. *Gærtn. f. Fruct.* iii. *t.* 220 (*Quadria*).

30. **Kermadecia,** *Brongn. et Gris in Ann. Sc. Nat. ser.* 5, i. 344, *et in Nouv. Arch. Mus. Par.* iv. *t.* 4.—Flores hermaphroditi, parum irregulares. Perianthii tubus obliquus, basi parum dilatatus; limbus oblongus v. subglobosus, rectus v. leviter incurvus, segmentis per anthesin solutis, laminis concavis. Antheræ in laminis subsessiles, oblongæ, connectivo latiusculo breviter apiculatæ. Discus hypogynus unilateralis, semiannulatus, carnosus, integer v. breviter 2-lobus. Ovarium in receptaculo obliquo subsessile; styli apex incrassatus v. subclavatus, stigmate terminali obliquo; ovula 2, collateralia, ab apice loculi pendula, orthotropa. Fructus oblongus v. subglobosus, indehiscens, pericarpio crasso carnoso. Semina . . . .—Arbores. Folia alterna, coriacea, integerrima et indivisa v. in eadem arbore pinnata. Flores mediocres v. longiusculi, geminatim pedicellati, in racemos longos ad ramos vetustos solitarios v. plures paniculatos dispositi. Bracteæ minutæ caducissimæ v. 0.

Species l. c. enumeratæ 3, omnes Novo-Caledonicæ, quibus tamen nobis addendæ videntur *Adenostephanus austro-caledonicus*, Brongn. et Gris l. c., et *A. Bleasdali*, Benth. Fl. Austral. v. 417, ex Australia tropica orientali. Genus *Guevinæ* et *Euplassæ* (*Adenostephano*) valde affine, et forte melius pro sectione prioris habendum, differt floribus apice minus incurvis et receptaculo magis obliquo.

31. **Macadamia,** *F. Muell. in Trans. Phil. Inst. Vict.* ii. 72, *cum ic.*—Flores hermaphroditi, regulares v. subregulares. Perianthium rectum v. vix incurvum, tubo tenui hinc fisso, segmentis per anthesin solutis recurvis. Stamina paullo infra laminas affixa, filamentis brevibus; antheræ oblongæ, connectivo in glandulam v. appendiculam brevem producto. Squamæ v. glandulæ hypogynæ 4, distinctæ v. in cupulam connatæ. Ovarium sessile; stylus elongatus, rectus, apice ovoideus v. clavatus, stigmate terminali parvo; ovula 2, sub apice lateraliter affixa, pendula. Drupa subglobosa, indehiscens, exocarpio carnoso, endocarpio crasso duro. Semen unicum globosum, v. 2 hemisphærica, cotyledonibus crassis inæqualibus.—Arbores v. frutices elatiores. Folia 3-4-natim verticillata, integra v. serrata. Flores parvi v. mediocres, geminatim pedicellati, in racemos simplices axillares v. terminales dispositi. Bracteæ parvæ, caducissimæ.

Species 2, Australiæ orientalis incolæ. *Benth. Fl. Austral.* v. 406, *excl. sp. n.* 3. Genus a Baillonio Adans. ix. 258 ad *Panopsin* (*Andriapetalum*) relatum cui certe characteribus pluribus accedit sed nobis satis distinctum videtur tam habitu et patria quam staminum insertione. *M. verticillata*, F. Muell., est, ex auctore in litt., verisimiliter *Brabejum stellatifolium*, stirps austro-Africana in horto Sydneyano culta; specimina nobis desunt et character in Flora Australiensi imprimis e schedis Muellerianis excerpta fuit, ovario non examinato.

32. **Roupala,** *Aubl. Pl. Gui.* i. 83, *t.* 32.—Flores hermaphroditi, regulares. Perianthium cylindraceum, rectiusculum, basi parum dilatatum, limbo vix latiore subgloboso oblongo v. elongato, segmentis per anthesin solutis revolutis. Stamina ad basin laminarum affixa, filamentis brevibus nunc brevissimis; antheræ oblongo-lineares, loculis septo imperfecto separatis, connectivo angusto apice brevissime producto. Squamæ hypogynæ 4, æquales, distinctæ, planæ, obtusæ v. acutæ, rarius glanduliformes. Ovarium sessile; styli apex clavatus, sulcatus, stigmate parvo terminali; ovula 2, collateralia, ab apice loculi pendula, orthotropa. Capsula dura, oblique 2-valvis, breviter stipitata. Semina ubi nota compressa, ala lata undique cincta.—Arbores glabræ v. ferrugineo-tomentosæ. Folia alterna, coriacea, rigida, integerrima v. dentata, indivisa v. ramorum sterilium (arboris

junioris ?) pinnata. Flores geminatim pedicellati, in racemos axillares v. laterales dispositi. Bracteæ 0 (v. minutæ caducæ ?).

Species editæ ad 30, Americæ tropicæ incolæ, quoad distinctiones difficillimæ, foliis interdum in eadem arbore integerrimis dentatis pinnatisque. *Meissn. in DC. Prod.* xiv. 425, *et in Mart. Fl. Bras.* v. i. *t.* 31 *ad* 33 (ovulis errore erectis depictis). *Ruiz et Pav. Fl. Per. et Chil. t.* 98, 99 (*Embothrium*). *H. B. et K. Nov. Gen. et Sp. t.* 118 *ad* 120. *Rudge, Pl. Gui. t.* 39. *Moric. Pl. Nouv. Amer. t.* 100. *Pohl, Pl. Bras. Ic. t.* 86 *ad* 88, 90. *Bot. Mag. t.* 6095. His addiderunt *Brongn. et Gris in Ann. Sc. Nat. ser.* 5, i. 345 speciem Novo-Caledonicam, a nobis non visam, characteribus ex auct. omnino *Roupalæ*, alteramque (*l. c. ser.* 5, xiii. 373) ex specimine nostro ab Americanis paullo diversam, foliis maximis integris 3-lobisve et squamis hypogynis in cupulam vix lobatam connatis.

Auctores recentiores nomen Aubletianum varie scripserunt Ropala, Rupala et Rhopala, sed derivatio valde incerta verisimiliter more Aubletiano ex nomine quodam vernaculo potius quam a ῥόπαλον, et orthographiam suam maluimus retinere.

33. **Lambertia,** *Sm. in Trans. Linn. Soc.* iv. 214, *t.* 20.—Flores hermaphroditi, regulares v. vix irregulares. Perianthii tubus elongatus, superne sæpe dilatatus et leviter incurvus, lobis angustis revolutis, 2 anticis sæpius altius solutis. Antheræ ad basin laminarum subsessiles, connectivo breviter apiculatæ. Squamæ hypogynæ 4, planæ, liberæ v. connatæ, rarius deficientes. Ovarium dense pilosum; stylus filiformis, superne interdum leviter incrassatus sulcatusque, stigmate parvo terminali v. postice breviter decurrente; ovula 2, pendula. Follicula sessilis, brevis, truncata, dura, margine inferiore sæpe in cornu producta, et valvulæ interdum angulo superiore cornutæ. Semina plana, anguste marginata.—Frutices. Folia 3–4-natim verticillata v. sub ramis vegetioribus sparsa, integra v. spinoso-dentata, venulis sæpe transversis. Flores longiusculi, rubri v. flavi, sessiles, solitarii v. septeni, bracteis coloratis imbricatis involucrati, involucris sessilibus terminalibus v. axillaribus.

Species 8, Australiæ extratropicæ imprimis occidentalis incolæ. *Benth. Fl. Austral.* v. 413. *Cav. Ic. t.* 547. *Andr. Bot. Rep. t.* 69. *Wendl. Sert. Hannov. t.* 21. *Field. Sert. Pl. t.* 22, 23. *Hook. Ic. Pl. t.* 553. *Bot. Reg. t.* 528. *Lodd. Bot. Cab. t.* 80.

34. **Xylomelum,** *Sm. in Trans. Linn. Soc.* iv. 214.—Flores hermaphroditi v. polygami, regulares. Perianthium tenuiter cylindraceum, limbo ovoideo recto, segmentis per anthesin solutis superne revolutis. Stamina paullo infra laminas affixa, filamentis brevibus; antheræ ovatæ, connectivo ultra loculos in appendiculam obtusam v. glanduliformem producto. Glandulæ hypogynæ 4, parvæ. Ovarium in floribus perfectis subsessile v. breviter stipitatum; stylus filiformis, apice clavatus, stigmate nunc terminali parvo nunc magno pulviniformi; in floribus sterilibus stylus apice clavatus stigmate non evoluto; ovula 2, collateralia, infra medium lateraliter affixa, amphitropa. Fructus magnus, ovoideus v. apice attenuatus, crassus, lignosus, diu indehiscens, demum (an semper ?) uno latere v. in valvas 2 dehiscens. Semen abortu sæpius unicum, erectum, samaroideum, nucleo compresso oblique ovato superne in alam membranaceam oblongam producto, raphe tenui nunc alam undique marginante nunc inconspicua.—Arbores v. frutices elatiores. Folia opposita, indivisa, integerrima v. spinoso-dentata. Flores mediocres, sub quaque bractea per paria sessiles, dense spicati, inferiores sæpius perfecti, superiores steriles, spicis oppositis axillaribus v. in fasciculo terminali demum laterali congestis. Bracteæ parvæ, in spica juniore imbricatæ, per anthesin deciduæ.

Species 4, omnes Australianæ. *Benth. Fl. Austral.* v. 407. *Gærtn. Fruct. t.* 47 (*Banksia*). *Wils. in White Voy. t.* 21 (*Banksia*). *Cav. Ic. t.* 536 (*Hakea*). *Endl. Iconogr. t.* 47, 48. *Reichb. Iconogr. Exot. t.* 90. *Hook. Ic. Pl. t.* 446.

35. **Helicia,** *Lour. Fl. Cochinch.* 83. (Helittophyllum, *Bl. Bijdr.* 652. Castronia, *Noronh. ex Miq.*)—Flores hermaphroditi, regulares. Perianthii tubus tenuis, limbo vix latiore recto ovato v. oblongo, segmentis per anthesin solutis revolutis. Antheræ filamentis brevibus paullo infra laminam affixæ, oblongæ, connectivo breviter appendiculatæ. Glandulæ hypogynæ 4, distinctæ v. in discum annularem v. cupulatum connatæ. Ovarium sessile; stylus elongatus, rectus, apice parum incrassatus, stigmate terminali;

ovula 2, basi v. lateraliter infra medium affixa, ascendentia. Fructus subglobosus, durus, indehiscens. Semina solitaria subglobosa v. 2 hemisphærica, testa rugosa v. venosa.—Arbores v. frutices elatiores. Folia alterna, integerrima v. dentata. Flores mediocres v. longiusculi, geminatim pedicellati, racemosi, racemis simplicibus terminalibus axillaribusve. Bracteæ parvæ, caducissimæ v. 0.

Species ad 25, Asiæ tropicæ et Australiæ incolæ. *Meissn. in DC. Prod.* xiv. 438. *Miq. in Ann. Mus. Lugd. Bat.* i. 204. *Benn. Pl. Jav. Rar. t.* 18. *Wight, Ic. t.* 190, 191 (*Rhopala*). *Bedd. Fl. Sylv. t.* 301.

36. **Orites,** *R. Br. in Trans. Linn. Soc.* x. 189.—Flores hermaphroditi, regulares. Perianthium cylindraceum, rectum, limbo parum incrassato, segmentis per anthesin sæpius a basi solutis. Antheræ filamentis brevibus infra laminas affixæ, oblongæ, connectivo angusto v. inconspicuo ultra loculos haud producto. Glandulæ hypogynæ 4, lineares, obtusæ. Ovarium sessile; stylus rectus, apice obtuso parum mucronato hinc sulcato, stigmate parvo terminali; ovula 2, lateraliter medium versus affixa, amphitropa. Fructus follicularis, obliquus, coriaceus, margine dorsali curvo dehiscens. Semina 1 v. 2, samaroidea, compressa, ala terminali obliqua v. falcata ad margines sæpe anguste decurrente.—Frutices v. arbores. Folia sparsa, integra dentata v. rarius hinc inde lobata. Flores parvuli, geminatim pedicellati v. subsessiles, dense racemosi, racemis axillaribus terminalibusve. Bracteæ concavæ, in inflorescentia juniore imbricatæ, longe ante anthesin caducæ.

Species 7, quarum 6 Australianæ montanæ. *Benth. Fl. Austral.* v. 410. *A. Rich. Sert. Astrol. t.* 25. *F. Muell. Pl. Vict. t.* 72 (*ined.?*). His addenda *Rhopala myrtoidea*, Pœpp. et Endl. Nov. Gen. et Sp. ii. 35, t. 149 (*Lomatia chilensis*, C. Gay, Fl. Chil. v. 310; Pataguа, Pœpp. ex Baill. Adans. x. 49) species e montibus Chilensibus formis integrifoliis *P. diversifoliæ*, Br. simillima, et characteres exhibens omnino *Oritis*.

Oritina, *R. Br. in Trans. Linn. Soc.* x. 224, ab auctore ipso *Prot. Nov.* 32 ad *Oritem* reducta fuit.

37. **Grevillea,** *R. Br. in Trans. Linn. Soc.* x. 167.—Flores hermaphroditi, regulares v. irregulares. Perianthii tubus tenuis rectusque, v. basi dilatatus et sub limbo recurvus v. revolutus, per anthesin latere inferiore sæpissime fissus; limbus obliquus, laminis per anthesin diu cohærentibus. Antheræ in laminis cavis sessiles, ovatæ v. oblongæ, connectivo ultra loculos non producto. Discus hypogynus carnosus, unilateralis, semi-annularis v. rarius perfecte annularis v. deficiens. Ovarium stipitatum v. subsessile; stylus sæpius elongatus et e fissura tubi protrusus, superne diu intra laminas cohærentes retentus, demum liberatus et sæpius correctus, interdum ab initio rectus brevis fusiformis; apex stigmatifer sæpissime incrassatus, nunc obliquus in discum lateralem dilatatus stigmate in medio disco parvo, nunc rectior conoideus stigmate terminali; ovula 2, collateralia, lateraliter affixa, amphitropa. Fructus sæpius follicularis, latere exteriore valde curvo dehiscens, rarius lignosus sub-2-valvis. Semina 2 v. abortu 1, plano-compressa, orbicularia v. oblonga, in alam membranaceam circumcirca v. apice solo v. latere exteriore tantum expansa, v. rarius exalata.—Arbores fruticesve. Folia alterna v. sparsa, heteromorpha. Flores geminatim pedicellati, racemosi, racemis terminalibus v. simul axillaribus, sæpius sessilibus elongatis, v. rarius paucifloris fere in umbellam contractis. Pubes dum adsit sæpius e pilis appressis medifixisque v. si erectis basi furcatis.

Species ultra 160, quarum 7 Novo-Caledonicæ. *Brongn. et Gris in Ann. Sc. Nat. ser.* 5, iii. 199. *J. D. Hook. in Hook. Kew Journ.* vii. *t.* 1. Cæteræ omnes Australianæ. *Benth. Fl. Austral.* v. 418. *F. Muell. Fragm. Phyt. Austral.* iv. *t.* 32, ix. 3, 123, x. 44. *Sm. Specim. Bot. N. Holl. t.* 9, 10 (*Embothrium*). *Cav. Ic. t.* 386, 387 (*Embothrium*). *Andr. Bot. Rep. t.* 100, 218, 272 (*Embothrium*). *Bauer, Illustr. t.* 9. *Sweet, Fl. Austral. t.* 7, 30, 38, 55. *Guillem. Ic. Pl. Austral. t.* 8, 11, 16. *Gaudich. in Freyc. Voy. Bot. t.* 46. *Endl. Iconogr. t.* 33. *F. Muell. Pl. Vict. t.* 71. *Hook. Exot. Fl. t.* 216. *Reichb. Iconogr. Exot. t.* 104, 105; *Ic. et Descr. Pl. t.* 76. *Bot. Mag. t.* 2661, 2807, 3133, 3184, 3185, 5285, 3798, 5007, 5837, 5870, 5915, 5919, 5971, 5979, 6105. *Bot. Reg. t.* 443, 1080, 1319, 1353. *Paxt. Fl. Gard. t.* 66. *Lemaire, Illustr. Hortic. t.* 61. *Lodd. Bot. Cab. t.* 50, 857, 858, 880, 1003, 1153, 1229, 1357, 1479, 1562, 1723. *Maund, Botanist, t.* 153.

Genus vastum pulcherrimum et polymorphum, in sectiones distinctas tamen difficillime dividendum. Primo aspectu formæ tres distinctæ observantur, a Meissnero in DC. Prod. xiv. 349 et seqq. pro subgeneribus definitæ: 1. *Eugrevillea*, perianthio valde incurvo, styli apice stigmatifero in discum obliquum v. lateralem dilatato; 2. *Conogyne*, perianthio recto, styli apice conoideo vertice stigmatifero; et 3. *Manglesia*, stylo brevi recto infra conum stigmatiferum fusiformi, sed species sæpe intermediæ et varie commixtæ occurrunt; in Fl. Austral. species in sectiones 11 distribuuntur, imprimis ad inflorescentiam et perianthii formam. Genera sequentia a variis auctoribus proposita a Meissnero v. in Fl. Austral. rite ad *Grevilleam* revocata sunt.

Stylurus et Lysanthe, *Salisb. in Knight, Prot.* 115, 116, vix nisi foliis parvis integerrimis a *Grevilleis* typicis disco stigmatifero laterali differunt. Molloya, *Meissn. in DC. Prod.* xiv. 348, et Strangea, *Meissn. in Hook. Kew Journ.* vii. 66, genera monotypica inter se valde affinia, et in unum sub nomine *Strangeæ* juncta a F. Muell. Fragm. Phyt. Austr. vii. 131, insignia sunt seminum integumento exteriore (testa) membranaceo a nucleo magis soluto quam in cæteris speciebus hucusque observatis, sed characteres cæteri omnino *Grevilleæ*. Anadenia, *R. Br. in Trans. Linn. Soc.* x. 166, includit species plures disco hypogyno vix conspicuo v. obsoleto, nunc in diversas sectiones distributas. Manglesia, *Endl. Nov. Stirp. Dec.* 25; *Hook. Ic. Pl. t.* 337 (*Anadenia*), includit species plures stylo infra conum stigmatiferum brevi fusiformi, sed mediante *G. acrobotrya*, Meissn., arcte cum cæteris sectionibus connectitur.

38. **Hakea,** *Schrad. Sert. Hannov.* 27, *t.* 17. (Conchium, *Sm. in Trans. Linn. Soc.* iv. 215.)—Flores hermaphroditi, irregulares v. rarius regulares. Perianthii tubus revolutus v. sub limbo recurvus, rarius rectus, per anthesin hinc sæpius fissus; limbus globosus v. ovoideus sæpe obliquus, segmentis mox basi solutis, laminis diutius cohærentibus. Antheræ in laminis cavis sessiles, ovatæ v. oblongæ, connectivo ultra loculos non producto. Discus hypogynus carnosus, unilateralis, semiannularis, interdum minimus. Ovarium stipitatum, stipite tamen sæpius brevi; stylus nunc ut in *Grevillea* elongatus e fissura tubi protrusus superneque intra laminas cohærentes retentus, nunc rectus perianthio brevior; apex stigmatifer incrassatus, nunc obliquus in discum lateralem dilatatus stigmate in medio disco parvo, nunc rectus conoideus stigmate terminali; ovula 2, collateralia, lateraliter affixa, amphitropa. Fructus capsularis, durus, sæpius lignosus, apice 2-valvatim dehiscens. Semina 2 v. abortu solitaria, collateralia, compressa, facie interiore plana, exteriore sæpius rugosa v. muricata, apice in alam oblongam membranaceam nucleo longiorem et ad margines sæpe decurrentem producta, raphe alam sæpius cingente v. hinc inde leviter intrusa.—Frutices v. rarius arbusculæ. Folia alterna, heteromorpha, coriacea, rigida, teretia v. plana, integra dentata v. varie dissecta. Flores geminatim pedicellati, breviter racemosi v. fasciculati, rarius longius racemosi, racemis fasciculisve in axillis sessilibus v. rarius terminalibus. Pubes dum adsit sæpius e pilis appressis medifixis ut in *Grevillea*.

Species enumeratæ 95, omnes Australienses. *Benth. Fl. Austral.* v. 490. *Gærtn. f. Fruct. t.* 219 (*Conchium*). *F. Muell. Fragm. Phyt. Austral.* x. 90.

Genus naturale, *Grevilleæ* valde affine et charactere nullo definito constanter diversum, etsi species utriusque generis pro maxima parte habitu inflorescentia fructu et seminibus facillime distinguuntur. In sectiones sequentes dividitur:—

1. *Grevilleoides.* Racemi sæpe longiusculi, exinvolucrati. Perianthium revolutum. Discus stigmatifer ad apicem styli obliquus v. lateralis.

2. *Euhakea.* Florum fasciculi sessiles, ante anthesin squamis imbricatis involucrati. Perianthium saltem sub limbo revolutum. Discus stigmatifer ad apicem styli obliquus v. lateralis. *Sm. in White Voy. t.* 22, *f.* 2 (*Banksia ex fructu solo*). *Labill. Pl. Nov. Holl. t.* 39 *ad* 41. *Cav. Ic. t.* 533, 534. *Sweet, Fl. Austral. t.* 27, 43. *Vent. Jard. Malm. t.* 111 (*Conchium*); *Jard. Cels. t.* 8 (*Embothrium*). *Ten. Fl. Nap. t.* 6. *Endl. Iconogr. t.* 24. *Reichb. Ic. et Descr. Pl. t.* 23, 24. *Hook. Ic. Pl. t.* 433, 434, 439, 442, 443. *Andr. Bot. Rep. t.* 215 (*Embothrium*). *Bot. Reg. t.* 475, 1489. *Lodd. Bot. Cab. t.* 219, 353, 1682.

3. *Conogynoides.* Florum fasciculi, rarius racemi, ante anthesin squamis imbricatis involucrati. Perianthium sub limbo revolutum. Stylus cono erecto v. vix obliquo vertice stigmatifero terminatus. *Sweet, Fl. Austral. t.* 45. *Vent. Jard. Malm. t.* 110 (*Conchium*). *Cav. Ic. t.* 535. *Hook. Ic. Pl. t*

432, 435, 437, 441, 444, 445, 447. Bot. Mag. t. 2579, 3424, 3760, 4528, 4643, 4644, *ultima in Lem. Jard. Fleur. t.* 45, 272, 376 *repetitæ*. *Lodd. Bot. Cab. t.* 1501, 1750.

4. *Manglesioides*. Florum fasciculi v. racemi breves, ante anthesin squamis imbricatis involucrati. Perianthium rectum. Stylus cono erecto vertice stigmatifero terminatum. *Colla, Hort. Ripul. App.* ii. *t.* 11. *Bot. Mag. t.* 2246. MEECKLINIA, *Regel, Gartenzeit.* 1857, 155.

39. **Carnarvonia**, *F. Muell. Fragm. Phytogr. Austral.* vi. 80, *t.* 55, 56.—**Flores hermaphroditi, regulares. Perianthii tubus cylindraceus, limbo vix latiore, segmentis per anthesin fere a basi solutis apice recurvis. Antheræ lineares, infra medium perianthii sessiles, connectivo breviter apiculatæ. Squamæ hypogynæ 0. Ovarium sessile v. subsessile, in stylum erectum attenuatum, stigmate parvo terminali; ovula 2, infra medium lateraliter affixa. Follicula dura, incurva. Semina compressa, samaroidea, superne in alam membranaceam producta, rapho hinc marginali sub apice refracta in media ala oblique usque ad hilum descendente.—Arbor. Folia alterna, coriacea, varie composita, foliolis latis. Flores parvi, racemosi, secus rhachin irregulariter sparsi, racemis axillaribus simplicibus ramosisve. Bracteæ angustæ, parvæ.**

Species 1, Australiæ tropicæ orientalis incola. *Benth. Fl. Austral.* v. 410.

40. **Buckinghamia**, *F. Muell. Fragm. Phytogr. Austral.* vi. 248.—Flores hermaphroditi, irregulares. Perianthii tubus tenuis, sub limbo globoso revolutus, segmentis per anthesin solutis. Antheræ in laminis cavis sessiles, connectivo ultra loculos haud producto. Squamæ hypogynæ in glandulam unilateralem semiannulatam truncatam crenulatam connatæ. Ovarium breviter stipitatum; stylus filiformis, apice in discum obliquum fere lateralem dilatatus, stigmate in medio disco parvo; ovula 4, collateralia, amphitropa, medio lateraliter affixa. Follicula compressa. Semina plano-compressa, tenuia, margine angusto aliformi cincta.—Arbor. Folia alterna, integra, pennivenia. Flores parvi, geminatim pedicellati, racemosi, racemis terminalibus. Bracteæ 0 v. caducissimæ.

Species 1, Australiæ tropicæ orientalis incola. *Benth. Fl. Austral.* v. 532.

41. **Darlingia**, *F. Muell. Fragm. Phytogr. Austral.* v. 152.—Flores hermaphroditi, regulares. Perianthii tubus tenuis, limbus globosus, erectus. Antheræ in laminis concavis sessiles, connectivo ultra loculos in glandulam minutam producto. Squamæ v. glandulæ hypogynæ 4, globosæ, distinctæ. Ovarium sessile; stylus filiformis, apice ovoideo-fusiformis, stigmate parvo terminali; ovula 4, collateralia, amphitropa, medio lateraliter affixa. Follicula compressa. Semina plano-compressa, tenuia, margine aliformi cincta.—Arbor. Folia alterna, integra v. pinnatifida, pennivenia. Flores per paria sessiles, interrupte spicati, spicis ad apices ramorum paniculatis. Bracteæ 0 v. minutæ caducissimæ.

Species 1, Australiæ tropicæ occidentalis incola. *Benth. Fl. Austral.* v. 533. Genus vix magis a *Buckinghamia* differt quam sectiones *Grevilleæ* inter se.

TRIBUS VI. EMBOTHRIEÆ.

42. **Cardwellia**, *F. Muell. Fragm. Phytogr. Austral.* v. 23.—Flores hermaphroditi, subirregulares. Perianthii tubus hinc fissus, sub limbo oblique globoso attenuatus recurvusque. Antheræ in laminis concavis sessiles, ovatæ. Squamæ v. glandulæ hypogynæ 4, distinctæ. Ovarium in stipitem brevem contractum; stylus elongatus, apice in discum lateralem dilatatus, stigmate in medio disco; ovula ∞, juxta apicem lateraliter affixa, 2-seriatim deorsum imbricata. Fructus crassus, lignosus, demum late folliculatim dehiscens. Semina plano-compressa, oblonga, margine aliformi cincta, seriebus basi transversim continuis.—Arbor. Folia alterna, abrupte pinnata. Flores brevissime per paria pedicellati, racemosi, racemis ad apices ramorum paniculatis. Bracteæ 0 v. caducissimæ.

Species 1, Australiæ tropicæ orientalis incola. *Benth. Fl. Austral.* v. 538, *et in Hook. Ic. Pl. t.* 1275.

43. **Stenocarpus**, *R. Br. in Trans. Linn. Soc.* x. 201. (Cybele, *Salisb. in Knight, Prot.* 123. Agnostus, *A. Cunn. in Loud. Hort. Brit.* 580.)—**Flores hermaphroditi, parum**

irregulares. Perianthii tubus elongatus, per anthesin hinc fissus, limbo subgloboso recurvo, segmentis demum a basi solutis. Antheræ in laminis concavis sessiles, late ovatæ, connectivo ultra loculos non producto. Discus hypogynus breviter cupulatus v. fere obsoletus. Ovarium stipitatum; stylus elongatus, apice in discum obliquum medio stigmatiferum dilatatus; ovula ∞, sub apice lateraliter affixa, deorsum 2-seriatim imbricata. Folliculus stipitatus, coriaceus, sæpius angustus. Semina deorsum producta in alam membranaceam.—Arbores. Folia alterna v. sparsa, integra v. alte pinnatifida, segmentis paucis. Flores flavi v. rubri, umbellati, umbellis ad apices ramorum v. in summis axillis pedunculatis solitariis v. pluribus breviter racemosis v. umbellatis. Bracteæ parvæ caducissimæ v. 0.

Species 14, quarum 11 Novo-Caledonicæ, 3 Australianæ. *Brongn. et Gris in Ann. Sc. Nat. ser.* 5, iii. 204. *Benth. Fl. Austral.* v. 539. *Labill. Sert. Austr. Caled. t.* 26. *Hook. Kew Journ.* vii. *t.* 2 (*Lomatia*). *Colla, Hort. Ripul. App.* i. *t.* 3 (*Hakea*). *Bot. Mag. t.* 4263, *ic. in Fl. des Serres, t.* 189 *repetita. Bot. Reg. t.* 441.

44. **Lomatia,** *R. Br. in Trans. Linn. Soc.* x. 199. (Tricondylus, *Salisb. in Knight, Prot.* 121.)—Flores hermaphroditi, parum irregulares. Perianthii tubus obliquus, postice fissus, superne angustior; limbus ovoideo-globosus, recurvus, segmentis demum solutis, laminis tamen diu cohærentibus. Antheræ in laminis concavis sessiles, ovatæ. Glandulæ hypogynæ 3, latæ, truncatæ, ovarium semicingentes, quarto postico deficiente. Ovarium longe stipitatum; styli apex obliquus, in discum sublateralem dilatatus, stigmate in medio disco parvo; ovula ∞, ascendentia, 2-seriatim imbricata. Folliculus stipitatus, coriaceus, demum expansus subplanus. Semina sursum imbricata, samaroidea, ala terminali-oblonga truncata undique raphe marginali rarius hinc inde intrusa cincta, et rarius ala angusta ad latera v. basin seminis.—Arbores fruticesve. Folia alterna v. rarius opposita, indivisa v. dissecta. Flores geminatim pedicellati, racemosi, racemis brevissimis v. elongatis axillaribus terminalibusve. Bracteæ parvæ caducissimæ v. 0. Cotyledones in seminibus examinatis profunde cordatæ, radicula in sinu retracta.

Species 9, quarum 3 Chilenses, 6 Australianæ. *Meissn. in DC. Prod.* xiv. 447. *Benth. Fl. Austral.* v. 536. *Ruiz et Pav. Fl. Per. et Chil. t.* 94, 97. *Cav. Ic. t.* 384, 385. *Labill. Pl. Nov. Holl. t.* 42, 43. *Sm. Specim. Bot. N. Holl. t.* 8. *Gærtn. f. Fruct. t.* 218 (*ic. præcedentes omnes sub Embothrio*). *Bot. Mag. t.* 1272, 4023, 4110. *Bot. Reg. t.* 442.

Endlicher, Gen. 342, species Chilenses distinxit seminibus utrinque alatis, sed nucleus etiam in his basi sæpe exalatus est. Cæterum *L. dentata* Br. et *L. obliqua* Br. e Chile distinguuntur racemis brevissime paucifloris. *L. ferruginea* Br., species pariter Chilensis, a Meissnero tamen cum Australianis associata, insignis est foliis plerisque oppositis verticillatisve bipinnatifidis, et perianthio brevi basi valde dilatata. Seminis nucleus basi interdum ut in speciebus cæteris Chilensibus anguste alatus, interdum ut in Australianis exalatus.

45. **Embothrium,** *Forst. Char. Gen.* 15, *t.* 8 *pro parte.*—Flores hermaphroditi, parum irregulares. Perianthii tubus cylindraceus, hinc fissus; limbus ovoideus v. globosus, obliquus v. recurvus, segmentis per anthesin solutis. Antheræ in laminis concavis sessiles, ovatæ, connectivo ultra loculos non producto. Discus hypogynus unilateralis, semiannulatus, carnosus, integer v. obscure 2–3-lobus. Ovarium longe stipitatum, angustum; styli apex oblongo-fusiformis v. oblique subdisciformis, stigmate parvo terminali v. in medio disco; ovula ∞, ascendentia, 2-seriatim imbricata. Folliculus stipitatus, oblongus, coriaceus, sublignosus. Semina 2-seriatim sursum imbricata, plano-compressa, samaroidea, ala terminali oblonga, raphe hinc marginali sub apice refracta in media ala cum margine parallela v. obliqua usque ad hilum descendente.—Frutices v. arbusculæ. Folia sparsa, coriacea, integerrima. Flores geminatim pedicellati, dense racemosi, speciosi, racemis ad apices ramorum sessilibus brevibus v. demum elongatis. Bracteæ minutæ caducissimæ v. 0, rarius paucæ sub racemo majores, membranaceæ, coloratæ, subinvolucrantes, multo tamen minus conspicuæ quam in *Telopea*.

Species 4, Americæ australis extratropicæ v. Andinæ incolæ. In speciebus 2 typicis, *R. Br. in Trans. Linn. Soc.* x. 195; *Meissn. in DC. Prod.* xiv. 443; *Ruiz et Pav. Fl. Per. et Chil. t.* 96; *Cav.*

Ic. t. 65; *Bot. Mag. t.* 4856, receptaculum floris fere rectum, styli apex parum obliquus, oblongo fusiformis, stigmate parvo terminali parum obliquo. Species 2, prioribus habitu simillimæ nisi inflorescentia laxiore, pro genere proprio a pluribus receptæ sunt: OREOCALLIS, *R. Br. in Trans. Linn. Soc.* x. 196, *Meisn. in DC. Prod.* xiv. 445, receptaculo valde obliquo, styli apice oblique ovali-oblongo fere in discum lateralem dilatato, stigmate in medio disco, sed cum Baillonio pro sectione tantum *Embothrii* habemus. *Ruiz et Pav. Fl. Per. et Chil. t.* 95. *Humb. et Bonpl. Pl. Æquinoct. t.* 139. His addidit F. Muell. Fragm. Phyt. Austral. viii. 164, speciem in montibus Australiæ tropicæ orientalis a W. Hill lectam, nobis ignotam.

46. **Telopea,** *R. Br. in Trans. Linn. Soc.* x. 197. (Hylogyne, *Salisb. in Knight, Prot.* 126.)—Flores hermaphroditi, parum irregulares. Perianthii tubus elongatus, basi latior, hinc fissus, superne cum limbo ovoideo recurvus, segmentis demum plus minus solutis. Antheræ in laminis concavis sessiles, ovatæ, connectivo ultra loculos non producto. Discus hypogynus carnosus, integer, valde obliquus sed fere perfecte annularis. Ovarium longe stipitatum, angustum; stylus elongatus, apice clavatus, stigmate obliquo; ovula ∞, ascendentia, 2-seriatim imbricata. Folliculus stipitatus, obliquus, coriaceus, recurvus. Semina 2-seriatim sursum imbricata, samaroidea, ala terminali oblonga recta v. obliqua, raphe hinc marginali, sub apice refracta, in media ala oblique usque ad hilum descendente.—Frutices elatiores. Folia alterna, integerrima v. dentata. Flores speciosi, rubri, geminatim pedicellati, densa racemosi, racemis terminalibus subglobosis v. ovoideis. Bracteæ exteriores vacuæ membranaceæ coloratæ inflorescentiam involucrantes, interiores sub florum paribus parvæ.

Species 2, Australienses. *Benth. Fl. Austral.* v. 534. *Labill. Pl. Nov. Holl. t.* 44. *Cav. Ic. t.* 388. *Sm. Specim. Bot. N. Holl. t.* 7. *Salisb. Parad. Lond. t.* 111. *Bot. Mag. t.* 1128 (*ic. omnes sub Embothrio*). Genus vix nisi involucro ab *Embothrio* distinctum, et forte melius (mediante *E. Wickhami*, F. Muell.?) illi adnexum.

47. **Knightia,** *R. Br. in Trans. Linn. Soc.* x. 193, *t.* 2. (Rymandra, *Salisb. in Knight, Prot.* 124.)—Flores hermaphroditi, regulares. Perianthium cylindraceum, limbo vix latiore, segmentis per anthesin solutis ultra medium revolutis. Antheræ in laminis sessiles, lineares, connectivo angusto ultra loculos haud producto. Glandulæ hypogynæ 4, æquales, distinctæ. Ovarium subsessile; styli apex lineari-clavatus, rectus v. basi obliquus, stigmate terminali parvo; ovula 4, a basi loculi collateraliter ascendentia, anatropa. Folliculi duri, sessiles, recti v. subfalcati. Semina samaroidea, ala terminali oblonga, raphe sub apice refracta in media ala obliqua usque ad hilum descendente.—Arbores et frutices. Folia sparsa, coriacea, integerrima v. grosse dentata. Flores geminatim pedicellati, in racemos densos sessiles axillares laterales v. terminales dispositi.

Species 3, quarum typica Novo-Zelandica racemis densis lateralibus ebracteatis, 2 Novo-Caledonicæ (sect. *Eucarpha*, Br.) racemis terminalibus axillaribusque, ante anthesin bracteis imbricatis coloratisque involucratis strobiliformibus; bracteæ tamen per anthesin deciduæ. Glandulæ hypogynæ in his multo majores quam in specie typica. *Hook. f. Handb. N. Zeal. Fl.* 241. *Brongn. et Gris in Ann. Sc. Nat. ser.* 5, iii. 208. *Labill. Pl. Nov. Holl.* ii. 116, *t.* 265, ubi stirps Novo-Caledonica errore etiam in Australia austro-occidentali crescere dicitur.

TRIBUS VII. BANKSIEÆ.

48. **Banksia,** *Linn. f. Suppl.* 15.—Flores hermaphroditi, regulares v. subregulares. Perianthii tubus tenuis, per anthesin hinc fissus v. segmentis omnibus solutis; limbus ovoideus oblongus v. linearis, laminis diu cohærentibus v. rarius cum tubi segmentis solvendis. Antheræ angustæ, in laminis cavis sessiles, connectivo crasso ultra loculos breviter producto. Squamæ hypogynæ 4, membranaceæ (v. rarius 0?). Ovarium parvum, sessile; stylus sæpius elongatus, e fissura tubi protrusus, superne diu intra laminas cohærentes retentus, demum liberatus et sæpius correctus, rarius perianthio brevior et ab initio rectus, apice stigmatifero striato v. sulcato continuo v. basi annulato, stigmate parvo terminali; ovula 2, amphitropa, medio collateraliter affixa. Capsula compressa, obliqua, superne latior, in valvas 2 lignosas dehiscens, styli cicatrice valde excentrico v.

laterali. Semina sæpius 2, compressa, in alam brevem latam rotundatam superne producta, et lamina ejusdem formæ simplici v. duplici separata.—Arbores v. frutices. Folia alterna v. rarius subverticillata, sæpius angusta, integra dentata v. pinnatifida, dentibus segmentisve numerosis brevibus, transversim venosa. Flores per paria sessiles, in spicas densas oblongas v. rarius globosas, terminales v. axillares, intra folia floralia sessiles conferti. Bracteæ cum bracteolis 2 minoribus margine dense lanato-villosæ, in seriebus parallelis spiralibus v. rarius rectis imbricatæ. Spica fructifera cum bracteis in strobilum crassum lignosum mutata, perianthiis marcescentibus capsulas obtegentibus, v. deciduis capsulis si perfectis e bracteis apice prominulis.

Species descriptæ 46, omnes Australianæ, pleræque extratropicæ. *Benth. Fl. Austral.* v. 542. In sectiones sequentes distribuuntur:—

1. *Oncostylis.* Stylus a perianthio demum solutus sed apice recurvo-hamatus nec incrassatus. Folia angusta, margine revoluta, subtus alba. *Sm. Specim. Bot. N. Holl. t.* 4. *Sweet, Fl. Austral. t.* 56. *Cav. Ic. t.* 537, 538. *Trattin. Thes. Bot. t.* 23, 24. *Reichb. Iconogr. Exot. t.* 81. *Hook. Exot. Fl. t.* 96. *Andr. Bot. Rep. t.* 156, 457. *Bot. Mag. t.* 738, 3060, 3535. *Bot. Reg. t.* 1363. *Paxt. Fl. Gard.* i. *t.* 35, *ic. in Fl. des Serres t.* 636, *et in Lem. Jard. Fleur. t.* 119 *repetita.*

2. *Cyrtostylis.* Stylus a perianthio demum solutus, arcuatus v. subrectus, apice incurvus nec hamatus nec incrassatus nec striatus. Folia plana v. undulata. *Labill. Voy. t.* 23. *Bot. Mag. t.* 3120. *Bot. Reg. t.* 1430, 1572.

3. *Eubanksia.* Stylus a perianthio demum solutus, rectus patens v. reflexus, apice tenuis nec striatus. Folia margine recurva v. revoluta, subtus alba. *Cav. Ic. t.* 541, 542, 544 *ad* 546. *Bot. Mag. t.* 1947, 2770. *Bot. Reg. t.* 697, 787. *Lodd. Bot. Cab. t.* 61, 241, 392.

4. *Orthostylis.* Stylus basi incurvus, superne rectus, erectus, apice stigmatifero conspicue angulato sulcato v. striato. Folia plana v. undulata. *Gærtn. Fruct. t.* 48. *Sm. in White Voy. t.* 18 *ad* 20. *Sweet, Fl. Austral. t.* 14. *Bauer, Illustr. t.* 3. *Cav. Ic. t.* 540, 543. *Bonpl. Jard. Malm. t.* 48. *Trattin. Thes. Bot. t.* 21, 22. *Wendl. Hort. Herrenh. t.* 8. *Andr. Bot. Rep. t.* 82, 258. *Bot. Mag. t.* 2406, 2671, 2803, 3052, 4906. *Bot. Reg. t.* 688, 1316, 1728.

5. *Isostylis.* Stylus cum perianthio ab initio rectus, apice tenui nec striato. Folia lata, undulata. Strobilus fructifer depresso-globosus.

Lamina membranacea simplex v. duplex inter semina in hoc genere et in *Dryandra* observata, constare videtur ex integumentis exterioribus seminum maturitate a semine solutis et inter se in laminam simplicem connatis v. omnino liberis.

49. **Dryandra,** *R. Br. in Trans. Linn. Soc.* x. 211, *t.* 3. (Josephia, *Salisb. in Knight, Prot.* 110.)—Flores hermaphroditi, regulares v. subregulares. Perianthii tubus tenuis, rectus; limbus oblongus v. linearis, segmentis per anthesin ad medium solutis apice revolutis v. rarius laminis diu cohærentibus. Antheræ in laminis cavis sessiles, connectivo crasso ultra loculos brevissime producto. Squamæ hypogynæ 4, angustæ, membranaceæ (v. rarius 0?). Ovarium parvum, sessile; stylus erectus, perianthio brevior v. rarius longior, primum arcuatus, demum laminis solutis correctus, apice stigmatifero lævi v. sulcato, stigmate parvo terminali; ovula 2, apice v. juxta apicem lateraliter affixa. Capsula compressa, apice rotundato in valvas 2 coriaceas v. lignosas dehiscens. Semina 2 v. abortu solitaria, compressa, apice in alam membranaceam late rotundatam producta, lamina membranacea simplici v. duplici separata, v. integumento exteriore haud soluto distincta.—Frutices sæpe humiles et prope basin florentes. Folia alterna, sæpius sinuata spinoso-dentata v. pinnatifida, dentibus segmentisve numerosis brevibus, subtus sæpe alba et transversim venosa. Flores per paria sub quaque bractea sessiles, dense capitati, capitulis terminalibus v. lateralibus squamis numerosis imbricatis involucratis et intra folia floralia sessilibus, receptaculo plano v. convexo villoso v. lanato. Bracteæ sub floribus anguste lineares v. paleaceæ, villosæ v. lanatæ, in medio capitulo interdum parvæ v. obsoletæ. Perianthia sæpius basi glabra, superne villosa. Ovarium semper villosum. Capsulæ superne sæpe glabratæ.

Species descriptæ 47, omnes ad Australiam occidentalem extratropicam limitatæ. *Benth. Fl. Austral.* v. 563. In sectiones sequentes distribuuntur:—

1. *Eudryandra.* Integumenta exteriora inter semina in laminam bifidam a seminibus liberam plus minus connata Involucri squamæ angustæ v. rarius latiusculæ. *Labill. Voy. t.* 24 (*Banksia*).

Sweet, Fl. Austral. t. 3, 53. *Planch. Hort. Donat. t.* 2. *Bot. Mag. t.* 1581, 1582, 3236, 4035, 4102, 4317, 4683 (*ic. in Lem. Jard. Fleur. t.* 226, *et Fl. des Serres t.* 728 *repetita*). *Bot. Reg. t.* 1455. Hemiclidia, *R. Br. Prod. Nov.* 40 est *D. falcata*, Br., ovulo altero abortivo demum in appendicem aliformem laminæ interseminalis mutato.

2. *Aphragmia*. Integumenta exteriora inter semina inter se libera v. facile solubilia, seminibus adhærentia v. soluta (lamina inter semina duplici v. 0). Involucra magna, squamis numerosis latis. *Bot. Mag. t.* 3063, 3500, 3513.

Ordo CXLV. THYMELEACEÆ.

Lindl. Veg. Kingd. 530. Baill. Hist. Pl. vi. 100. Daphnoideæ, Endl. Gen. 329. Aquilarineæ, Endl. Gen. 332. Lindl. Veg. Kingd. 579.

Flores hermaphroditi v. abortu polygami v. dioici, regulares. *Perianthium* inferum, tubo cylindraceo basi sæpe circa ovarium latiore rarius urceolato ; lobi (v. limbi segmenta) 4 v. 5 imbricata per anthesin patentia, æqualia v. rarius 2 interiora paullo minora. *Squamæ* numero loborum æquales v. sæpius duplæ rarissime triplæ, intra tubum uniseriatim affixa ad faucem v. in medio tubo v. prope basin tubi v. in pluribus generibus 0. *Stamina* numero loborum æqualia v. dupla, in uno genere dimidio pauciora supra medium tubum v. ad faucem affixa, quæ lobis opposita sæpius altius quam quæ lobis alterna ; filamenta filiformia brevia sæpius brevissima, in paucis generibus antheris longiora. *Antheræ* erectæ v. dorso prope basin affixæ, 2-loculares, loculis parallelis in facie interiore connectivi latiusculi v. connectivo angustissimo v. inconspicuo contiguis, rima longitudinali dehiscentibus. *Discus* hypogynus annularis, cupularis, 4–5-squamatus v. 0. *Ovarium* sessile v. breviter stipitatum, integrum, 1-loculare v. (in trib. 2 et 3) 2-loculare. *Stylus* nunc brevis v. brevissimus, nunc filiformis elongatus, in ovario 1-loculari sæpius excentricus mox sublateralis, in ovario 2-loculari centralis ; stigma terminale, capitatum v. subdiscoideum. *Ovulum* in ovario v. in quoque loculo 1, apicem juxta lateraliter affixum, anatropum, pendulum, raphe ventrali. *Fructus* exceptis *Aquilarieis* indehiscens, nuceus baccatus v. drupaceus. *Semen* in fructu v. in loculis solitarium, pendulum v. lateraliter affixum, testa crustacea v. rarius membranacea, endopleura membranacea bene distincta. *Albumen* carnosum sat copiosum v. sæpius parcum v. 0. *Embryo* rectus ; cotyledones carnosæ, sæpius crassæ, radicula brevi supera.

Arbores fruticesve, rarissime herbæ annuæ tenuesque, libro tenaci filamentoso v. reticulato. Folia opposita v. sæpius alterna v. sparsa, integerrima, nunc numerosa parva uninervia venis sæpius parum conspicuis, nunc majora v. ampla, pennivenia. Stipulæ 0. Flores capitati v. breviter racemosi v. spicati, rarius solitarii, capitulis spicisve ad apices ramorum v. in axillis sessilibus v. rarius pedunculatis. Bracteæ variæ, haud raro paucæ, exteriores capitulum involucrantes.

Species ad 360, in temperatis orbis veteris imprimis Africæ australis regionis Mediterraneæ et Australiæ numerosæ, inter tropicos pauciores, in America tam boreali quam australi plurimæ, haud tamen numerosæ.

Ordo facile distinctus, ab auctoribus bene inter *Daphnales* inclusus, etsi intermediis nullis cum ordinibus cæteris connexus. Affinitatem cum *Celastrineis* et *Rhamnaceis* a Baillonio indicatam non sentimus.

FORMÆ ABNORMES.

Perianthium truncatum limbo nullo distincto in *Dirca*, fere ad basin partitum in *Octolepide*.
Stamina ad 2 reducta in *Pimelea*, ∞ in *Gonystylo*.
Ovarium 4-loculare in *Octolepide*, 4–5-loculare in *Gonystylo*.

CONSPECTUS GENERUM.

Tribus I. Euthymelæeæ. Ovarium 1-loculare, ovulo unico. Fructus indehiscens.

Series 1. *Squamæ perianthii* 0. *Stamina numero loborum dupla v. si æqualia v. pauciora iis opposita.*

* *Stamina numero loborum æqualia v. pauciora.*

1. Pimelea. Stamina 2.—*Australia, Nov. Zelandia.*

2. Schœnobiblos. Stamina 4. Folia ampla.—*Amer. trop.*

** *Stamina numero loborum dupla. Discus hypogynus 0 v. brevissime annularis. Perianthium in fructu persistens v. deciduum nec circumscissum. Flores 4-meri, hermaphroditi.*

3. Daphne. Flores hermaphroditi. Perianthii tubus cylindraceus, limbus patens. Stylus brevissimus v. 0, stigmate magno. Pericarpium carnosum v. succosum.—*Europa, Asia temp. et subtrop.*

4. Ovidia. Flores hermaphroditi. Perianthii tubus tenuis, limbus patens. Stylus elongatus, filiformis. Pericarpium carnosum v. succosum.—*Chile et Andes Popayan.*

5. Dirca. Flores hermaphroditi. Perianthium superne latius, oblique truncatum v. dentatum, limbo nullo patente. Pericarpium carnosum v. succosum.—*Amer. bor.*

6. Thymelæa. Flores hermaphroditi. Perianthii tubus sæpius urceolatus, limbus patens. Stylus brevis, stigmate sæpius parvo. Pericarpium membranaceum.—*Reg. Mediterr., Europa, Asia media, ins. Canar.*

*** *Stamina numero loborum dupla. Discus hypogynus plus minus lobatus v. obliquus. Perianthium in fructu persistens v. totum deciduum nec circumscissum. Flores 4–5-meri, hermaphroditi v. abortu dioici.*

7. Daphnopsis. Flores 4-meri, abortu dioici. Discus e lobis v. squamis 2–4, saltem sub ovario imperfecto floris ♂. Stylus fl. ♀ brevis.—*Amer. trop.*

8. Lasiadenia. Flores 5-meri, sæpius polygami. Discus e squamis lobisve longe ciliatis. Stylus filiformis.—*Guiana, Cuba.*

9. Dais. Flores 5-meri. Discus cupulatus, glaber. Stylus filiformis, stigmate ovoideo-capitato.—*Afr. austr., Madagasc.*

10. Edgeworthia. Flores 4-meri. Discus annularis lobis brevissimis. Stylus cylindraceus, stigmate longo lineari.—*Ind. or., China, Japonia.*

11. Wikstrœmia. Flores 4-meri, hermaphroditi. Discus 4- v. 2-fidus. Stylus brevis nunc brevissimus, stigmate magno.—*Asia trop. et austr., Australia, ins. maris Pacifici.*

**** *Stamina numero loborum dupla. Perianthium supra ovarium sæpissime demum circumscissum, basi persistente fructum includente.*

12. Stellera. Perianthii tubus tenuis. Discus unilateralis. Folia alterna, plana.—*Asia centr. et occid.*

13. Arthrosolen. Perianthii tubus tenuis v. cylindraceus. Discus 0. Stylus filiformis, stigmate parvo. Fruticuli v. suffrutices foliis sparsis planis.—*Africa austr. et trop.*

14. Diarthron. Perianthii tubus brevis v. tenuis. Discus 0. Stylus brevis, stigmate subclavato. Herbæ annuæ, tenues, foliis alternis linearibus.—*Asia temperata.*

15. Passerina. Perianthium urceolatum, lobis tubo æquilongis. Stamina exserta. Discus 0. Stylus filiformis, stigmate globoso. Frutices ericoidei, foliis decussatim oppositis parvis.—*Afr. austr.*

16. Chymococca. Perianthium fructiferum carnosum. Cætera *Passerinæ*.—*Afr. austr.*

Series 2. *Squamæ perianthii numero loborum duplæ v. æquales, intra tubum infra stamina simplici serie affixæ, lineares oblongæ v. breves. Stamina numero loborum dupla.*

17. Goodallia. Flores dioici, 5-meri, pedicellati, perianthio continuo persistente. Squamæ 10, lineares, prope basin tubi.—*Guiana.*

18. Funifera. Flores dioici, 4-meri, sessiles, perianthio continuo persistente. Squamæ 8, lineares, prope basin tubi.—*Brasilia.*

19. Lagetta. Flores hermaphroditi, 4-meri, laxe spicati v. racemosi, perianthio urceolato persistente. Squamæ 4, latæ, sub stamina conniventes.—*Ind. occid.*

20. Cryptadenia. Flores hermaphroditi, 4-meri, in axillis solitarii, perianthio supra ovarium demum circumscisso. Squamæ 8, in medio tubo adnatæ.—*Afr. austr.*

21. Lachnæa. Flores hermaphroditi, 4-meri, sæpius capitati, perianthio supra ovarium demum circumscisso, lobis sæpe inæqualibus. Squamæ 8, sub fauce staminibus alternæ.—*Afr. austr.*

Series 3. *Squamæ perianthii numero loborum æquales duplæ v. triplæ, ad faucem supra stamina affixæ, in una specie deficientes. Flores hermaphroditi. Stamina numero loborum æqualia v. dupla.*

* *Stamina numero loborum æqualia, iis alterna.*

22. Drapetes. Filamenta filiformia. Squamæ 4 v. 8, breves, lobis oppositæ, v. 0. Fruticuli prostrati, ramosissimi, capitulis terminalibus paucifloris.—*Amer. antarct., N. Zel., Australia, Borneo.*

23. Struthiola. Antheræ intra tubum sessiles. Squamæ faucis 4 8 v. 12, glanduliformes, ciliis cinctæ. Fruticuli virgati, floribus axillaribus.—*Afr. austr.*

** *Stamina numero loborum dupla. Pericarpium membranaceum, perianthii circumscissi basi persistente inclusum.*

24. Gnidia. Flores hermaphroditi, 4-meri.—*Afr. austr. et trop.*

25. Lasiosiphon. Flores hermaphroditi, 5-meri.—*Afr. austr. et trop., Madagasc., Asia trop.*

*** *Stamina numero loborum dupla. Pericarpium durum, perianthio continuo inflato v. appresso inclusum, v. perianthio fisso stipatum, v. perianthio deciduo denudatum.*

26. Linostoma. Discus hypogynus 0. Squamæ ad faucem distinctæ. Flores paniculati. Bracteæ in pedunculo 2, demum auctæ, coloratæ.—*Ind. or., Brasilia bor.*

27. Dicranolepis. Discus hypogynus cupularis. Squamæ ad faucem petaloideæ lobos subæquantes. Flores ad axillas sessiles. *Afr. trop.*

28. Synaptolepis. Discus hypogynus cupularis. Squamæ ad faucem breves, truncatæ, in annulum subconnatæ. Flores breviter cymulosi.—*Afr. trop.*

29. Stephanodaphne. Discus hypogynus 0. Squamæ ad faucem breves, in annulum fimbriatum connatæ. Flores capitati v. spicati.—*Madagasc., Comores.*

Tribus II. Phalerieæ. Ovarium 2-loculare, loculis 1-ovulatis. Drupa 2-pyrena v. abortu 1-pyrena. Discus hypogynus cupularis.

30. Peddiea. Flores pedicellati. Perianthii faux nuda. Stamina tubo inclusa.—*Afr. austr. et trop.*

31. Leucosmia. Flores sessiles. Perianthii faux intus squamata. Stamina subexserta, filamentis anthera brevioribus.—*Ins. maris Pacifici.*

32. Phaleria. Flores sessiles. Perianthii faux intus nuda, lobi patentes. Stamina exserta, filamentis filiformibus, antheris parvis. *Ceylon, Archip. Malay., Australia.*

33. Pseudais. Flores sessiles. Perianthii faux intus nuda, dentibus brevibus erectis. Stamina subexserta, filamentis filiformibus, antheris parvis.—*Molucca.*

Tribus III. Aquilarieæ. Ovarium 2-loculare, loculis 1-ovulatis. Capsula compressa, loculicide 2-valvis. Discus hypogynus 0. Squamæ faucis in annulum connatæ.

34. Gyrinops. Perianthii tubus tenuiter cylindraceus. Stamina 5.—*Ind. or., Archip. Malay.*

35. Gyrinopsis. Perianthii tubus cylindraceus. Stamina 10.—*Ind. or., Archip. Malay.*

36. Aquilaria. Perianthium campanulatum. Stamina 10.—*Archip. Malay., Asia or.*

GENERA ANOMALA.

37? Octolepis. Perianthium parvum, fere ad basin 4-fidum. Stamina 8. Ovarium 4-loculare, loculis 1-ovulatis.—*Afr. trop.*

38? Gonystylus. Perianthium 5-fidum. Stamina ∞. Ovarium 4-5-loculare, loculis 1-ovulatis.—*Java.*

GENERA EXCLUSA V. DUBIA.

Hornera, Jungh. in Hœv. et Vriese, Tijdschr. vii. 314, genus ad species 2 Japonicas inter se evidenter dissimiles propositum valde dubium est. Species ex Maximowiczio in litt. certe non

Japonicæ et characteres plantæ nulli nobis notæ conveniunt. Flores descripti fere *Struthiolæ*, inflorescentia tamen aliena.

CANSJERA, Juss., inter **Olacineas** recensetur, supra, i. 349.

LEPTONIUM, Griff., est *Lepionurus*, Blum., inter **Olacineas**, supra, i. 349.

JENKINSIA, Griff., est *Miquelia*, Meissn., inter **Olacineas**, supra, i. 354.

INOCARPUS, Forst., est **Leguminosa**, supra, i. 552.

HERNANDIA, Linn., est **Laurinea** anomala, supra, 164.

CHAMPEREIA, Griff., quærenda est sub **Santalaceis**, infra.

TRIBUS I. EUTHYMELÆEÆ.

1. **Pimelea,** *Banks in Gærtn. Fruct.* i. 186, *t.* 39. (Banksia, *Forst. Char. Gen.* 7, *t.* 4, *non Linn. f.* Cookia, *Gmel. Syst.* ii. 24, *non Sonn.*)—Flores hermaphroditi v. rarius dioici. Perianthii tubus cylindraceus; lobi 4, patentes v. rarius erecti, fauce intus nuda v. leviter transversim incrassata v. subplicata. Stamina 2, fauci affixa, lobis exterioribus opposita, filamentis breviter v. longiuscule filiformibus; antheræ ovatæ v. oblongæ, connectivo angusto v. late dorsali. Discus hypogynus 0. Ovarium 1-loculare, stylo elongato, stigmate capitato. Fructus parvus, perianthii basi inclusus, pericarpio membranaceo v. rarius succoso. Seminis testa crustacea; albumen copiosum parcum v. 0; cotyledones carnosæ.—Frutices suffrutices v. rarius herbæ. Folia opposita v. sparsa, sæpius parvula. Flores capitato-spicati v. fasciculati, terminales v. axillares, rarissime solitarii.

Species editæ 76, Australiæ et Novæ Zelandiæ incolæ. *Meisn. in DC. Prod.* xiv. 496. *Hook. f. Handb. N. Zeal. Fl.* 242. *Benth. Fl. Austral.* vi. 1, ubi seminum testa errore endocarpium dicta.

Genus naturalissimum, floribus diandris in ordine facillime distinctum et in integrum servandum, etsi nonnullæ e sectionibus sequentibus characteribus aliunde genericis æstimatis separentur:—

1. *Thecanthes.* Florum capitula involucro 4-lobo cincta. Herbæ annuæ, glabræ, Australiæ tropicæ et subtropicæ incolæ. Cætera *Eupimeleæ*. *Endl. Iconogr. t.* 11. THECANTHES, *Wikstr. in K. Vetensk. Akad. Stockh. Handl.* 1818, 271.

2. *Eupimelea.* Bracteæ liberæ, vix foliis caulinis latiores. Perianthii fructiferi tubus continuus. Albumen parcum. Fruticuli prostrati v. ramosissimi, Australiæ orientalis et Novæ Zelandiæ incolæ, foliis sæpius oppositis planis v. concavis. *Bot. Mag. t.* 3270.

3. *Heterolæna.* Bracteæ liberæ, foliis caulinis multo latiores. Perianthium continuum. Albumen copiosum. Frutices Australiæ occidentalis, foliis oppositis planis v. margine recurvis. *Labill. Pl. Nov. Holl. t.* 5. *Sweet, Fl. Austral. t.* 8. *Bot. Mag. t.* 1458, 3459, 3721, 3950. *Bot. Reg. t.* 1578 *et* 1811, *t.* 33. *Lodd. Bot. Cab. t.* 88, 1283, 1708, 1966. *Maund, Botanist, t.* 136. HETEROLÆNA, *Fisch. et Mey. Ind.* x. *Sem. Hort. Petrop.* 47.

4. *Calyptrostegia.* Bracteæ liberæ, variæ. Perianthium post anthesin supra ovarium circumscissum, basi persistente fructum includente. Frutices Australienses, habitu vario, v. rarius herbæ annuæ tenues. Albumen varium. *Labill. Pl. Nov. Holl. t.* 3, 4, 6, 7. *Sweet, Fl. Austral. t.* 52. *Sm. Bot. Nov. Holl. t.* 11. *Rudge in Trans. Linn. Soc.* x. *t.* 13, *f.* 2, *t.* 14. *Bonpl. Jard. Malm. t.* 31. *Hook. Ic. t.* 865. *Hook. f. Fl. Tasm. t.* 95. *Bot. Mag. t.* 891, 3276, 3288, 3833, 4543. *Bot. Reg. t.* 1268. 1439, 1582, 1827 *et* 1838, *t.* 24. *Lodd. Bot. Cab. t.* 1611, 1668, 1965. *Maund, Botanist, t.* 61. 147, 243. CALYPTROSTEGIA, *C. A. Mey. in Bull. Acad. Imp. Petersb.* iv. (1845) 72, pro parte. GYMNOCOCCA, *Fisch. et Mey. Ind.* x *Sem. Hort. Petrop.* 46. MACROSTEGIA, *Turcz. in Bull. Soc. Imp. Nat. Mosc.* 1852, ii. 177 (*species bracteis magnis coloratis insignis*).

5. *Malistachys.* Frutices Australiæ occidentalis, floribus parvis stricte dioicis. Cætera *Calyptrostegiæ*.

6. *Dithalamia.* Frutices Australienses, floribus parvis stricte dioicis. Cætera *Eupimeleæ*. *F. Muell. Pl. Vict. t.* 76. *Lodd. Bot. Cab. t.* 179.

7. *Epallage.* Antherarum connectivum dorsale latum, loculis in facie interiore parallelis, nec ut in cæteris sectionibus in connectivo angustiore lateralibus demum dorso contiguis. Cætera fere *Calyptrostegiæ*. *Rudge in Trans. Linn. Soc.* x. *t.* 13, *f.* 1. *F. Muell. Fragm. Phyt. Austral.* vi. *t.* 59. *Bot. Mag. t.* 3281. CALYPTROSTEGIA, *C. A. Mey. l. c. pro parte.*

2. **Schœnobiblos,** *Mart. et Zucc. Nov. Gen. et Sp.* i. 65.—Flores hermaphroditi v. abortu dioici. Perianthii tubus brevissimus, fauce intus nuda; segmenta 4, angusta,

patentia. Stamina 4, segmentis opposita iisque basi adnata; filamenta filiformia, segmentis breviora; antheræ oblongæ, connectivo angusto subnullo. Discus hypogynus 0. Ovarium ovoideum, sessile v. breviter stipitatum, 1-loculare; stigma didymum, sessile. Drupa perianthio deciduo nuda, ovoidea, exocarpio filamentoso, endocarpio duro. Seminis testa crassiuscule membranacea; albumen (v. cotyledones?) crasso-carnosum.—Arbores fruticesve. Folia alterna, ampla, membranacea. Flores umbellati, umbellis ad apices ramorum longe pedunculatis solitariis v. paucis paniculatis, pedicellis basi subarticulatis. Bracteæ 0.

Species 2, Brasiliæ borealis, Guianæ et Venezuelæ incolæ. *Meissn. in DC. Prod.* xiv. 519, *et in Mart. Fl. Bras.* v. i. 65, *t.* 28.

De seminis structura, in unico tantum examinato vix maturo, haud certi sumus.

3. **Daphne,** *Linn. Gen. n.* 485.—Flores hermaphroditi. Perianthii tubus cylindraceus, basi sæpe latior; lobi 4, patentes, fauce intus nuda. Stamina 8, tubo 2-seriatim inclusa v. superiora vix exserta, filamentis brevissimis; antheræ subsessiles, oblongæ, connectivo angusto v. inconspicuo. Discus hypogynus 0. Ovarium sessile v. subsessile, 1-loculare; stylus brevis nunc brevissimus v. subnullus, stigmate magno capitato. Bacca perianthio deciduo nuda v. perianthio persistente inclusa, carnosa v. subsicca, globosa ovoidea v. oblonga. Seminis testa crustacea; albumen parcum v. sæpius 0; cotyledones carnosæ, crassæ v. rarius subplanæ.—Frutices erecti v. prostrati. Folia sparsa conferta v. dissita, perennantia v. decidua. Flores sæpius colorati, capitati v. brevissime racemosi, capitulis racemisve ad nodos vetustos in axillis foliorum v. ad basin innovationum sessilibus paucifloris v. plurifloris subpaniculatis.

Species ad 36, per Europam et Asiam temperatam v. subtropicam dispersæ. *Meissn. in DC. Prod.* xiv. 530, in sectiones sequentes distribuendæ:—

1. *Eudaphne* (*Laureola, Gnidium et Mezereum*, Meissn.). Frutices sæpius erecti. Flores brevissime racemosi, axillares v. ad apices ramorum conferti. Perianthium a fructu carnoso sæpissime deciduum. *Jacq. Fl. Austr. t.* 183; *Hort. Schœnbr. t.* 351. *Reichb. Ic. Fl. Germ. t.* 553 (*f.* 1173), 555, 556. *Sibth. Fl. Græc. t.* 356. *Jaub. et Spach, Ill. Pl. Or. t.* 303. *Hayne, Arzneigew.* iii. *t.* 43 *ad* 45. *Bot. Mag. t.* 1282, 1587. *Andr. Bot. Rep. t.* 73. *Sweet, Brit. Fl. Gard. t.* 200, *ser.* 2, *t.* 320.

Mezereum, *C. A. Mey. in Bull. Acad. Petersb.* i. (1843) 358, a *Daphne* generice separatum fuit ob semen exalbuminosum. Albumen tamen nullum v. rarius parcum in toto genere hucusque observato.

2. *Daphnanthes*, Meissn. Frutices humiles, ramosissimi v. diffusi. Flores in capitulis terminalibus sessiles. Perianthium sæpius plus minus sericeo-pubescens, diu persistens, fructum minus carnosum v. siccum includens. *Reichb. Ic. Fl. Germ. t.* 553 (*f.* 1174, 1175), 554. *Sibth. Fl. Græc. t.* 357 *ad* 359. *Desf. in Ann. Mus. Par.* x. *t.* 20. *Jaub. et Spach Ill. Pl. Or. t.* 304 *ad* 306. *Pall. Fl. Ross. t.* 35. *Royle. Ill. Pl. Himal. t.* 81. *Sm. Spicileg. t.* 18. *Bot. Mag. t.* 313, 428, 1875. *Bot. Reg.* 1838, *t.* 56.

D. altaica, Pall., et *D. alpina*, Linn., a Meissnero sub *Mezereo* enumeratæ, melius ad *Daphnanthem* referendæ. *D. Blagayana*, Fresen. in Prodromo sub *Daphnanthe* inclusa, est potius *Eudaphnes* species *D. glomeratæ*, Lam., valde affinis.

In *D. odora*, Sm. Exot. Bot. t. 47, *D. cannabina*, Wall. in Asiat. Res. xiii. t. 7, affinibusque paucis, flores ad apices ramorum congesti sed bracteis intermixti nec stricte capitati, et ramulo sæpe demum excurrente sublaterales evadunt, et hæ species facile pro sectione distincta habendæ.

3. *Genkwa*. Frutices. Flores 2–6 in capitulis lateralibus sessilibus v. breviter pedunculatis ebracteatis sessiles, perianthio dense sericeo circa fructum siccum persistente. Species 2 Chinenses: *D. Genkwa*, Sieb. et Zucc. Fl. Jap. t. 75 (*D. Fortunei*, Lindl. in Journ. Hort. Soc. ii. t. 1), et *D. Championi*, Benth. Fl. Hongk. 296.

4. *Eriosolena*. Meissn. Frutices. Flores in capitulis lateralibus pedunculatis primum bracteis 2–4 inclusis sessiles, perianthio sericeo deciduo baccam nudante. Species 2, Indiæ orientalis et Archipelagi Malayani incolæ. *Sm. Ic. Ined. t.* 34. Scopolia, *Linn. f. Suppl.* 60. *non Jacq.* Eriosolenia, *Bl. Bydr.* 651.

4. **Ovidia,** *Meissn. in DC. Prod.* xiv. 524.—Flores hermaphroditi (rarius abortu uni-

sexuales?). Perianthii tubus tenuis, in faucem ampliatus; lobi 4, patentes, fauce intus nuda. Stamina 8, 4 ad basin loborum, 4 intra tubum affixa, filamentis filiformibus; antheræ ovatæ, filamento multo breviores, connectivo inconspicuo. Discus hypogynus 0. Ovarium sessile, glabrum, stylo longe filiformi exserto, stigmate parvo subcapitato. Bacca ovoidea, perianthio deciduo nuda. Seminis testa crustacea, endopleura membranacea; albumen parcum; cotyledones magnæ, carnosæ.—Frutices erecti, ramosi, foliosi. Folia sparsa, sessilia v. subsessilia, obovato-oblonga elliptica v. lanceolata. Flores ad apices ramorum umbellati, umbellis sessilibus v. pedunculatis demum sæpe ramulo excurrente lateralibus. Bracteæ sub umbella 1 v. 2, foliaceæ caducissimæ v. 0.

Species editæ 4, quarum 3 ex Chile australi forte unius varietates, quarta ex Andibus Popayanensibus nobis ignota. *Meissn. l.c. Pœpp. et Endl. Nov. Gen. et Sp. t.* 191 (*Daphne*).

5. **Dirca**, *Linn. Gen. n.* 486.—Flores hermaphroditi. Perianthium corollinum, basi tubulosum, supra ovarium contractum, superne in faucem subobliquam intus nudam ampliatum, margine truncato sinuato v. brevissime 4-fido non patente. Stamina 8, medio tubo affixa, exserta, filamentis filiformibus; antheræ parvæ, oblongæ, connectivo angusto. Annulus hypogynus brevissimus v. obsoletus. Ovarium sessile, glabrum, 1-loculare; stylus filiformis, exsertus, stigmate parvo obtuso. Bacca perianthio deciduo nuda. Seminis testa crustacea; albumen 0; cotyledones crassiusculæ.—Frutices virgato-ramosi. Folia alterna, membranacea, decidua. Flores præcoces, e gemmis foliaceo-bracteatis 2–3-ni, in pedunculo communi brevi nunc brevissimo sessiles, ebracteati.

Species 2, boreali-Americanæ. *Meissn. in. DC. Prod.* xiv. 527. *Bot. Reg. t.* 292. *A. Gray in Proc. Amer. Acad.* viii. 631.

6. **Thymelæa**, *Endl. Gen. Pl. Suppl.* iv. ii. 65.—Flores hermaphroditi v. abortu polygami. Perianthium urceolatum v. rarius præsertim in fl. ♂ tubo tenuiter cylindraceo; lobi 4, patentes, fauce intus nuda. Stamina 8, tubo 2-seriatim inclusa, filamentis brevissimis; antheræ breves v. oblongæ, connectivo inconspicuo. Discus hypogynus 0 v. minute annulatus. Ovarium subsessile, 1-loculare; stylus brevis nunc brevissimus, stigmate capitato sæpius parvo. Fructus siccus, perianthio persistente inclusus v. rarius perianthio toto deciduo nudus; pericarpium membranaceum. Seminis testa crustacea; albumen parcum v. 0; cotyledones crasso-carnosæ.—Herbæ perennes rarius annuæ suffrutices v. fruticuli ramosissimi. Folia sparsa, sæpius parva v. angusta. Flores parvi, ad axillas sessiles, fasciculati v. solitarii. Bracteæ parvæ.

Species ad 20, regionis Mediterraneæ imprimis orientalis incolæ, sed ab ins. Canariensibus usque ad Persiam dispersæ, paucæ in Europa v. Asia media magis extensæ. *Meissn. in DC. Prod.* xiv. 551.

Genus in sectiones sequentes dividitur:—

1. *Lygia.* Species 3, annuæ v. basi perennes, caulibus tenuibus virgatis, floribus minimis. *Jacq. Ic. Rar. t.* 68. *Reichb. Ic. Fl. Germ. t.* 550 (*utraque sub Stellera*). *Griff. Ic. Pl. As. t.* 534 (*Passerina*). Lygia, *Pasano ex Meissn. l. c.*

2. *Chlamydanthus.* Suffrutices dense foliati. Perianthium persistens, basi fructum includens. *Reichb. Ic. Fl. Germ. t.* 551, 522. *Sibth. Fl. Græc. t.* 354, 355 (*Daphne*). *Desf. Fl. Atl. t.* 94, 95 (*Passerina*). *Boiss. Voy. Esp. t.* 157, 158 (*Passerina*). Chlamydanthus, *C. A. Mey. in Bull. Acad. Sc. Petersb.* i. (1843) 358.

In icone Fl. Gr. t. 354, *T. tartonrairæ*, stigma depictum est *Daphnes*, magnum, discoideum, sessile, quod tamen in speciminibus nostris non invenimus.

3. *Piptochlamys.* Fruticulus ramosissimus, dense foliatus, foliis brevibus crassis obtusis. Fructus perianthio deciduo nudus. *Reichb. Ic. Fl. Germ. t.* 550. *Sibth. Fl. Græc. t.* 360. *Bot. Mag. t.* 1949 (*omnes sub Passerina*). Piptochlamys, *C. A. Mey. in Bull. Acad. Sc. Petersb.* i. (1843), 358.

Nomen *Thymelæa* ab auctoribus pluribus perperam Tournefortio tribuitur, nam *Thymelæa*, Tournef., est *Daphne*, Linn., limitibus indefinitis extensa, et *Thymelæaceas* fere omnes Tournefortio notas includens. *Thymelææ* nostræ a Linnæo sub *Passerina* et *Stellera* enumeratæ sunt.

7. **Daphnopsis**, *Mart. et Zucc. Nov. Gen. et Sp.* i. 65. (Nordmannia, *Fisch. et Mey. et*

Hargasseria, *C. A. Mey. in Bull. Acad. Sc. Petersb.* i. 1843, 355.)—Flores abortu dioici. Fl. ♂: Perianthii tubus tenuis; lobi 4, patentes, fauce intus nuda. Stamina 8, 4 superiora in mediis lobis, 4 inferiora ad faucem lobis alterna; antheræ sessiles, connectivo inconspicuo. Squamæ sub ovario 2 v. 4, parvæ, rarius lineares. Ovarium plus minus stipitatum, prima facie perfectum etsi parvum sed abortivum, ovuli rudimento sæpius minimo. Fl. ♀: Perianthium quam in ♂ multo minus, nunc tubo latiusculo suburceolatum v. anguste turbinatum, demum circumscissum, lobis parvis, nunc tubo brevissimo alte 4-fidum, sub fructu persistens. Staminodia minuta v. 0. Ovarium oblongum, sessile, 1-loculare, in stylum brevem crassum attenuatum, stigmate capitato. Fructus ovoideus v. subglobosus, pericarpio carnoso fibroso v. tenui. Seminis testa crustacea, endopleura membranacea; albumen 0; cotyledones crassæ, carnosæ, radicula brevissima.—Arbores fruticesve. Folia sparsa, plana, membranacea v. subcoriacea, glabra v. subtus sericeo-pubescentia. Flores umbellulati capitati v. subracemosi, inflorescentiis nunc ad apices ramorum paniculatis, nunc axillaribus v. in trunco lateralibus.

Species ad 20, Americæ calidioris a Brasilia et Peruvia usque ad Mexicum incolæ.—*Meissn. in DC. Prod.* xiv. 520, *et in Mart. Fl. Bras.* v. i. 66, *t.* 28. *Griseb. Cat. Pl. Cub.* 110.

Genus forte in sectiones 2 dividendum:—

1. *Nordmannia.* Species Andinæ Mexicanæ v. Indiæ occidentalis cum una Brasiliana (*D. brasiliensi*, Mart.), floribus umbellatis subcapitatis v. umbellulis longe pedunculatis v. ad apices ramorum paniculatis, perianthio tomentoso. 2. *Neivira*, Griseb. Symb. Fl. Argent. 133, species Brasilianæ, nonnullæ adhuc ineditæ, floribus parvis ad axillas v. ad nodos vetustos breviter subracemosis, perianthio glabro v. leviter piloso. Fructus tamen specierum plurimarum adhuc ignotus. *D. cubensis*, Meissn., ad *Lasiodeniam* transfertur. COLEOPHORA, *Miers in Ann. Nat. Hist. ser.* 2, vii. 197; *Illustr.* ii *t.* 74, ex ic. et descr. nobis videtur ead. ac *Daphnopsis* (*Neivira*) *Martii*, Meissn., floribus masculis (ovario evoluto etsi abortivo) pro hermaphroditis descriptis. *Lagetta alpestris*, Gardn. in Hook. Lond. Journ. iv. 135, in Prodromo omissa, pariter ad *Daphnopsin* (*Neiviram*) referenda est.

8. **Lasiadenia,** *Benth. in Hook. Lond. Journ.* iv. 632. (Linodendron, *Griseb. in Mem. Amer. Acad. ser.* 2, viii. 187; *Cat. Pl. Cub.* 109.)—Flores sæpius abortu polygami. Perianthii tubus elongatus, basi leviter incrassatus, intus pilosus; lobi 5, patentes, fauce intus nuda. Stamina 10, ad faucem 2-seriata, filamentis breviter filiformibus quam lobi brevioribus; antheræ ovatæ v. oblongæ, connectivo angusto. Squamæ hypogynæ (sæpius 5) brevissimæ, pilis longis dense ciliatæ. Ovarium pilis longissimis dense barbatum, 1-loculare; stylus tenuis, plus minus elongatus, stigmate obtuso oblongo v. capitato. Fructus siccus, perianthio persistente integro v. fisso inclusus, pericarpio rigidulo haud crasso. Seminis testa crustacea, nitida; albumen parcum v. 0; cotyledones carnosæ.—Arbores libro reticulato. Folia sparsa, membranacea v. subcoriacea, venosa. Flores capitati, capitulis in pedunculo simplici solitariis v. pedunculo ramoso paucis ebracteatis. Perianthium dense cano-tomentosum.

Species 5, una Guianensis, *Meissn. in DC. Prod.* xiv. 528, *et in Mart. Fl. Bras.* v. i. 69, *t.* 29, cæteræ Cubenses, *Griseb. ll. cc.*

9. **Dais,** *Linn. Gen. n.* 540.—Flores hermaphroditi. Perianthii tubus cylindraceus, sæpe incurvus; lobi 5, patentes, fauce intus nuda. Stamina 10, tubo 2-seriatim inclusa v. superiora breviter exserta, filamentis brevibus; antheræ oblongæ, connectivo inconspicuo. Discus hypogynus cupulatus, membranaceus, truncatus v. dentatus, ovarium basi cingens. Ovarium villosum, 1-loculare; stylus longe filiformis, stigmate ovoideo v. globoso-capitato. Fructus siccus, perianthii basi inclusus, pericarpio membranaceo. Seminis testa crustacea; albumen 0; cotyledones latæ, carnosulæ.—Frutices. Folia opposita v. sparsa, ad apices ramorum sæpe conferta. Flores dense capitati, capitulis ad apices ramorum pedunculatis. Bracteæ 2–6, sæpius 4, breves, latæ, rigidulæ, capitulum involucrantes. Perianthia sericeo-villosa.

Species 2, altera Africæ australis, altera Madagascariæ incola. *Meissn. in DC. Prod.* xiv. 529. *Lam. Ill. t.* 368 *f.* 1. *Gærtn. Fruct. t.* 39. *Jacq. Ic. Rar. t.* 77. *Bot. Mag. t.* 147.

10. **Edgeworthia,** *Meisn. in Denkschr. Regensb. Bot. Gesellsch.* iii. 280, *t.* 6.—Flores hermaphroditi. Perianthii tubus cylindraceus, sæpe incurvus; lobi 4, patentes, fauce intus nuda. Stamina 8, tubo 2-seriatim inclusa, filamentis brevissimis; antheræ oblongæ, connectivo inconspicuo. Discus hypogynus annularis, brevissimus, breviter lobatus. Ovarium sessile, villosissimum, 1-loculare, in stylum desinens, stigmate longe lineari-cylindraceo undique papilloso. Fructus perianthii basi inclusus, pericarpio vix carnoso. Seminis testa crustacea.—Frutices. Folia membranacea, sparsa, ad apices ramorum sæpius conferta. Flores dense capitati, capitulis in axillis inferioribus v. infra folia pedunculatis, v. ante foliorum evolutionem sessilibus. Bracteæ capitulum involucrantes plurimæ, nunc parvæ (v. 0 ?). Perianthia sericeo-villosa.

Species 2, altera Indiæ orientalis, altera Chinæ et Japoniæ incola. *Meisn. in DC. Prod.* xiv. 543 *Wall. in Asiat. Res.* xiii. *t.* 9 (*Daphne*). *Bot. Reg.* 1847, *t.* 48.

11. **Wikstroemia,** *Endl. Prod. Fl. Norf.* 47 ; *Iconogr. t.* 22.—Flores hermaphroditi. Perianthii tubus elongatus; lobi 4, patentes, fauce intus nuda. Stamina 8, tubo 2-seriatim inclusa v. superiora breviter exserta, filamentis brevissimis; antheræ oblongæ, connectivo inconspicuo. Discus hypogynus e squamellis angustis 4 v. 2, rarius 1. Ovarium sessile v. subsessile, villosum, 1-loculare; stylus brevis nunc brevissimus, stigmate magno globoso-capitato. Fructus baccatus, perianthio deciduo nudus, v. subsiccus perianthii basi inclusus, pericarpio carnoso v. membranaceo. Seminis testa crustacea; albumen parcum v. 0; cotyledones carnosæ.—Frutices v. rarius arbores. Folia opposita v. rarius alterna. Flores ad apices ramorum breviter racemosi v. spicati. Bracteæ 0.

Species ad 20, Asiæ tropicæ et orientalis, Australiæ, et ins. Maris Pacifici incolæ. *Meisn. in DC. Prod.* xiv. 543 (speciebus nonnullis reducendis). *Benth. Fl. Austral.* vi. 37.

Genus *Daphni* valde affine, differt squamis hypogynis et quodammodo habitu, in sectiones sequentes dividitur:—

1. *Euwikstrœmia,* Meissn. Perianthium sæpius glabrum v. vix pilosulum, a fructu sæpius baccato deciduum. *Hook. et Arn. Bot. Beech. t.* 15 (*Daphne*).

2. *Diplomorpha,* Meissn. Perianthium tenuius, sæpissime sericeum, spicis sæpe laxe ∞-floris. Fructus subsiccus, pericarpio tenui perianthio diu persistente incluso. *Dcne. in Jacquem. Voy. Bot. t.* 149. Diplomorpha, *Meisn. in Denkschr. Regensb. Gesellsch.* iii. 289. *C. A. Mey. in Bull. Acad. Petersb.* i. (1843), 357.

W. subspicata, Meissn., disco nullo, verisimiliter ad *Arthrosolenem* referenda est. Capura, *Linn. Mant.* 149, ex specimine manco in herb. Linn. servato videtur *W. indica*, genus tamen e charactere falso nequaquam recognoscendum.

12. **Stellera,** *Linn. Amœn. Acad.* i. 399, *pro parte.*—Flores hermaphroditi. Perianthii tubus cylindraceus, demum supra ovarium circumscissus; lobi 4, rarius 5, patentes, fauce intus nuda. Stamina 8, rarius 10, tubo 2-seriatim inclusa, filamentis brevissimis; antheræ oblongo-lineares, connectivo angusto. Discus hypogynus in laminam linearem v. lanceolatam rarius 2-fidam uno latere productus. Ovarium subsessile, 1-loculare; stylus brevis, stigmate capitato. Fructus siccus, basi perianthii persistente inclusus, pericarpio membranaceo. Seminis testa crustacea; albumen parcum v. 0; cotyledones carnosæ.—Herbæ perennes suffrutices v. frutices. Folia alterna, plana. Flores ad apices ramorum sessiles, capitati v. demum spicati.

Species editæ 8, verisimiliter ad 6 reducendæ, Asiæ centralis et occidentalis incolæ. *C. A. Mey. in Bull. Acad. Petersb.* i. (1843), 359. *Meisn. in DC. Prod.* xiv. 548.

Genus in sectiones 2 dividitur:—1. *Chamæstellera,* C. A. Mey. Species glabræ, caulibus e basi lignosa simplicibus, capitulo terminali rarius in spicam accrescente, perianthio glabro.—*Ledeb. Ic. Fl. Ross. t.* 374 (*Passerina*). 2. *Dendrostellera,* C. A. Mey. Caule sæpius fruticuloso ramoso, perianthio extus basi præsertim dense villoso-lanato. *Endl. et Fenzl, Sert. Cabul. t.* 3 (*Dais*). *Jaub. et Spach, Ill. Pl. Or. t.* 301, 302.

Linnæus l. c. *Thymelæam arvensem* et *Stelleram Chamæjasmen* sub *Stellera* includit, charactere imprimis a priore deducto, auctores recentiores nomen genericum posteriori tribuunt.

13. **Arthrosolen,** *C. A. Mey. in Bull. Acad. Imp. Petersb.* i. (1843) 359.—Flores her-

maphroditi. Perianthii tubus cylindraceus, tenuis, demum supra ovarium sæpissime circumscissus; lobi 4, rarius 5, patentes, fauce intus nuda. Stamina 8, rarius 10, 2-seriatim tubo inclusa, filamentis brevibus; antheræ oblongæ v. lineares, connectivo inconspicuo. Discus hypogynus 0. Ovarium subsessile, 1-loculare; stylus filiformis sæpius elongatus, stigmate parvo capitato. Fructus siccus, calycis basi persistente inclusus, pericarpio membranaceo. Seminis testa crustacea; albumen parcum v. 0; cotyledones carnosæ. Fruticuli v. frutices ramosi, habitu nunc *Wikstrœmiæ* nunc *Gnidiæ*. Folia sparsa, plana. Flores nunc spicati, spicis terminalibus ebracteatis v. basi tantum bracteatis v. bracteis foliaceis quasi axillares, nunc capitati, capitulis terminalibus bracteis paucis foliaceis involucratis.

Species 10, Africæ australis incolæ, quarum una usque ad regiones tropicas extensa. *Meisn.* in *DC. Prod.* xiv. 559. *Lodd. Bot. Cab. t.* 311, 755 (*Passerina*).

Genus a *Wikstrœmia* differt imprimis stylo elongato tenui, a *Gnidia* et *Lasiosiphone* fauce intus nuda. In una specie (inedita?), *A. gymnostachya*, C. A. Mey., cæterum valde affini, perianthium totum ut in *Wikstrœmia* persistit, sed stylus *Arthrosolenis*.

14. **Diarthron,** *Turcz.* in *Bull. Soc. Imp. Nat. Mosc.* 1832, 204 *et* 1852, ii. 464, *t.* 11. —Flores hermaphroditi. Perianthii tubus urceolatus v. tenuis, supra ovarium constrictus demum circumscissus; lobi 4, patentes, fauce intus nuda. Stamina 8, 2-seriatim tubo inclusa v. rarius superiora breviter exserta, filamentis brevissimis; antheræ oblongæ, connectivo inconspicuo. Discus hypogynus 0. Ovarium subsessile, glabrum, 1-loculare; stylus brevis, stigmate ovoideo subclavato. Fructus siccus, basi perianthii persistente inclusus, pericarpio membranaceo. Seminis testa crustacea; albumen parcum v. 0.—Herbæ annuæ, habitu *Thymelææ* sect. *Lygiæ*, graciliores tamen, glabræ et ramosiores. Folia sparsa, linearia. Flores minimi, in spicas laxas terminales v. ramulo excurrente laterales dispositi. Bracteæ 0.

Species 2, Asiæ temperatæ a Persia usque ad Mantschuriam incolæ. *Meisn.* in *DC. Prod.* xiv. 558. *Jaub. et Spach, Ill. Pl. Or. t.* 105. *Griff. Ic. Pl. Ind. Or. t.* 535.

15. **Passerina,** *Linn. Gen. n.* 489; *Hort. Cliff. t.* 11.—Flores hermaphroditi. Perianthii tubus e basi ovoidea breviter tenuis, supra ovarium demum circumscissus; lobi 4, patentes, tubo sæpe æquilongi, fauce intus nuda. Stamina 8, fauci affixa, exserta, filamentis lobis paullo brevioribus; antheræ ovatæ v. oblongæ, connectivo angusto. Discus hypogynus 0. Ovarium subsessile, glabrum, 1-loculare; stylus tenuiter filiformis, stigmate globoso papilloso-hirto. Fructus siccus, perianthii basi persistente sæpius inclusus, pericarpio membranaceo. Seminis testa crustacea; albumen carnosum, crassiusculum; cotyledones carnosæ, plano-convexæ.—Frutices ericoidei. Folia parva, decussatim opposita. Flores ad axillas bractearum foliis caulinis sæpius latiorum sessiles, in spicas ramulos terminantes dispositi.

Species 4, Africæ australis incolæ. *Meisn.* in *DC. Prod.* xiv. 562.

16. **Chymococca,** *Meisn.* in *DC. Prod.* xiv. 565.—Flores hermaphroditi. Perianthii urceolati tubus supra ovarium constrictus vix tamen circumscissus; lobi 4, patentes, tubo vix breviores, fauce intus nuda. Stamina 8, fauci affixa, exserta, filamentis lobis paullo brevioribus; antheræ ovato-oblongæ, connectivo angusto. Discus hypogynus 0. Ovarium subsessile, glabrum, 1-loculare; stylus filiformis, stigmate globoso. Fructus baccatus, perianthii basi inclusus, v. perianthio demum deciduo denudatus, striatus, pericarpio crassiusculo carnoso. Semen albuminosum, testa crassiuscula demum subcrustacea; cotyledones carnosæ, crassiusculæ.—Frutex ericoideus, habitu foliis et inflorescentia *Passerinæ*, a qua fructu solo differt. Folia floralia seu bracteæ a foliis caulinis non diversa.

Species 1, Africæ australis incola. *Benth.* in *Hook. Ic. Pl. t.* 1264.

17. **Goodallia,** *Benth.* in *Hook. Lond. Journ.* iv. 633.—Flores dioici. Fl. ♂: Perianthii tubus ovoideus, lobi 5, patentes, fauce intus nuda. Stamina 10, superiora subexserta, inferiora tubo inclusa, filamentis brevibus; antheræ ovatæ, connectivo inconspicuo. Squamæ

10, lineares, tubo prope basin intus affixæ. Pistilli rudimentum minimum v. 0. Fl. ♀: Perianthium quam in mare magis urceolatum, lobis suberectis. Staminodia 0. Squamæ tubi ut in fl. ♂ lineares, glabræ. Discus hypogynus 0. Ovarium sessile, dense pilosum, 1-loculare; stylus tenuis, demum exsertus, stigmate capitato. Fructus perianthio aucto inclusus, pericarpio vix carnoso. Seminis testa crustacea; albumen parcum v. 0; cotyledones carnosæ.—Frutex arborescens, ramosissimus, glaber v. innovationibus leviter sericeis. Folia alterna, brevissime petiolata, ex oblongo orbiculata. Flores ad apices ramulorum pauci, fasciculati, brevissime pedicellati.

Species 1, Guianensis. *Meissn. in DC. Prod.* xiv. 527. *Benth. in Hook. Ic. Pl. t.* 1265.

18. **Funifera,** *Leandr. ex C. A. Mey. in Bull. Acad. Imp. Petersb.* i. (1843) 357.—Flores dioici. Fl. ♂: Perianthii tubus oblongus; lobi 4, patentes, fauce intus nuda. Stamina 8, tubo 2-seriatim inclusa v. superiora breviter exserta; antheræ ovatæ, connectivo inconspicuo. Squamæ 8, lineares, glabræ, tubo prope basin inter pilos longos affixæ. Pistilli rudimentum minimum v. 0. Fl. ♀: Perianthium maris v. basi latius. Staminodia 0. Squamæ tubi ut in fl. ♂. Discus hypogynus 0. Ovarium sessile, dense pilosum, 1-loculare; stylus filiformis, stigmate capitato. Fructus perianthio parum aucto inclusus, pericarpio vix carnoso. Seminum testa crustacea; albumen parcum v. 0; cotyledones carnosæ.—Frutices, libro tenui. Folia sparsa, per intervalla sæpius conferta quasi verticillata, lanceolata, coriacea. Flores dense breviterque racemosi v. ♀ capitati, racemis capitulisve ad apices ramorum v. in axillis superioribus sessilibus. Bracteæ paucæ, caducæ. Perianthia sericea.

Species 2, Brasilienses. *Meissn. in DC. Prod.* xiv. 525. *Mart. et Zucc. Nov. Gen. et Sp.* i. *t.* 39 (*Lagetta*).

Bosca, *Vell. Fl. Flum.* 150, *Ic.* iv. *t.* 11 ad *Funiferam* dubie refertur, descriptio nimis brevis vix convenit; icon pessima speciei cuidam *Daphnopseos* similior est.

19. **Lagetta,** *Juss. Gen. Pl.* 77.—Flores hermaphroditi v. abortu unisexuales. Perianthii tubus urceolatus, sub fauce constrictus; lobi 4, breves, patentes, fauce intus supra stamina nuda. Stamina 8, 4 superiora ad basin loborum, 4 inferiora sub fauce affixa, filamentis brevissimis; antheræ subsessiles, ovatæ, connectivo inconspicuo. Squamæ 4, breves, subconnatæ, ad stricturam tubi infra stamina circa stigma conniventes, tubum subclaudentes. Discus hypogynus 0. Ovarium sericeo-villosum, 1-loculare; stylus brevis, stigmate magno capitato-clavato, ex ore squamarum demum prominente. Fructus siccus, perianthio persistente inclusus; pericarpio rigidule membranaceo. Seminis testa tenuiter crustacea; albumen (ex Gærtn.) parcum; cotyledones crasso-carnosæ.—Arbores libro eleganter reticulato. Folia alterna, oblonga v. lata. Flores in spicis racemisve terminalibus laxis pauci, sessiles v. breviter pedicellati. Bracteæ 0. Perianthia extus glabra.

Species 2, Indiæ occidentalis incolæ. *Meissn. in DC. Prod.* xiv. 526. *A. Rich. Fl. Cub.* iii. 192. *Gærtn. f. Fruct.* iii. *t.* 215. *Hook. Kew Journ.* ii. *t.* 4. *Bot. Mag. t.* 4502, *ic. in Lem. Jard. Fleur. t.* 19 *repetita,* utraque quoad stamina erronea.

L. alpestris, Gardn. in Hook. Lond. Journ. iv. 135, in Prodromo prætermissa, videtur potius *Daphnopseos* species. Specimina ♀ tantum nobis adsunt.

De seminis structura *Lagettæ* incerti sumus, in seminibus 2 a nobis examinatis, intra endopleuram more generis tenuiter membranaceam massam carnosam invenimus extus rugoso-plicatam, radicula nuda prominente nec cotyledones distinctas exhibentia, sed forte imperfecte matura.

20. **Cryptadenia,** *Meissn. in Linnæa,* xiv. 404, *et in DC. Prod.* xiv. 573.—Flores hermaphroditi. Perianthii tubus cylindraceus, supra ovarium constrictus, demum circumscissus, ad faucem ampliatus; lobi 4, patentes, tubo sæpius longiores, fauce intus supra stamina nuda. Stamina 8, omnia v. superiora e tubo breviter exserta, filamentis filiformibus; antheræ ablongæ, connectivo angusto. Squamæ v. glandulæ ∞, ovoideæ v. oblongæ, in medio tubo infra stamina 1-seriatim adnatæ, staminibus alternæ. Discus hypogynus 0. Ovarium sessile, 1-loculare; stylus tenuiter filiformis, stigmate globoso v. ovoideo. Fructus siccus, perianthii basi persistente inclusus, pericarpio tenuiter membranaceo.

Seminis testa crustacea, nitida; albumen carnosum; embryo subteres, cotyledonibus parum dilatatis.—Fruticuli ericoidei, ramosissimi. Folia decussatim opposita, parva, coriacea, obtusa v. acerosa. Flores ad apices ramulorum v. in summis axillis solitarii, 2-bracteolati, rosei violacei v. albidi, perianthio sericeo.

Species 4 v. 5, Africæ australis incolæ. *Bot. Mag. t.* 292 (*Passerina*) *et t.* 4143.

21. **Lachnaea**, *Linn. Gen. n.* 490.—Flores hermaphroditi. Perianthii tubus undique tenuis v. supra ovarium constrictus, demum circumscissus; lobi 4, patentes, exteriores sæpe cæteris majore, fauce intus supra stamina nuda. Stamina 8, summo tubo affixa, sæpius breviter exserta, filamentis filiformibus; antheræ sæpius parvæ, connectivo angusto. Squamæ v. glandulæ 8, lineares v. clavatæ, intra tubum staminibus alternæ v. paullo inferius affixæ. Discus hypogynus 0. Ovarium sessile, 1-loculare; stylus filiformis, stigmate globoso v. ovoideo. Fructus siccus, parvus, perianthii basi persistente inclusus, pericarpio tenuiter membranaceo. Seminis testa crustacea, nitida; albumen carnosum; embryo subteres v. cotyledonibus leviter applanatis.—Fruticuli ericoidei, ramosissimi. Folia opposita v. sparsa, sæpius parva, coriacea. Flores ad apices ramorum capitati v. rarius solitarii, capitulis bracteis paucis involucratis v. nudis. Perianthium extus sericeum, intus pilosum v. rarissime glabrum.

Species ad 18. Africæ australis incolæ. *Meissn. in DC. Prod.* xiv. 574. ubi genus in sectiones 3 sequentes dividitur:—

1. *Sphæroclinium.* Capitula terminalia, floribus in receptaculo communi globoso sessilibus. *Salisb. Parad. Lond. t.* 109. *Bot. Mag. t.* 1295, 1594, 1657, 1658. *Andr. Bot. Rep. t.* 104, 293, 524. *Lodd. Bot. Cab. t.* 273.

2. *Conoclinium.* Capitula terminalia, receptaculo conico v. demum cylindraceo. Flores quam in *Sphæroclinio* minores, pubescentes v. sericei.

3 *Microclinium.* Flores solitarii v. pauci, ad apices ramorum subcapitati, receptaculo obsoleto.

Radojitskya, *Turcz. in Bull. Soc. Imp. Nat. Mosc.* 1852, ii. 176 (*L. axillaris*, Meissn), a cæteris speciebus differt floribus parvis, in summis axillis solitariis brevissime pedicellatis fere glabris. Characteres cæteri omnino *Lachnææ*.

22. **Drapetes**, *Banks, ex Lam. in Journ. Hist. Nat.* i. 188, *t.* 10, *et Illustr. t.* 915.—Flores hermaphroditi. Perianthii tubus breviter cylindraceus v. campanulatus; lobi 4, sæpius patentes, fauce intus nuda, v. squamis 4 v. 8 lobis sigillatim v. geminatim oppositis coronata. Stamina 4, fauci affixa, lobis alterna, filamentis breviter filiformibus; antheræ oblongæ, connectivo angusto. Discus hypogynus 0. Ovarium sessile, 1-loculare; stylus elongatus, stigmate capitato, juniore sæpe piloso. Fructus subbaccatus, pericarpio carnosulo. Seminis testa crustacea; albumen carnosum (v. 0?); cotyledones ovatæ, crassæ.—Fruticuli diffusi prostrati v. dense cæspitosi. Folia alterna, parva, coriacea, concava, imbricata. Flores ad apices ramorum capitulati, capitulis inter folia caulinis conformia sessilibus, interdum ramulo florifero excrescente foliis deciduis quasi pendunculatis, receptaculo inter flores piloso.

Species 5, una ex America antarctica, 2 Novo Zelandicæ, 1 Australiensis, quinta Borneensis. *Hook. f. in Hook. Lond. Journ.* ii. *t.* 17, *in Hook. Kew Journ.* v. *t.* 7. *Hook. Ic. Pl. t.* 895.

Genus in integrum servatum naturalissimum, ab omnibus facillime distinctum et habitu et staminibus lobis perianthii isomeris iisque ad faucem alternis, ab auctoribus tamen recentioribus in genera 3 ad squamas fauci dividitur, nempe: 1. Drapetes, species unica typica, austro-Americana, fauce esquamata. 2. Kelleria, *Endl. Gen. Pl. Suppl.* iv. ii. 61, species Novo Zelandica, squamis ad quemque lobum solitariis. Et 3. Daphnobryon, *Meissn. in DC. Prod.* xiv. 566, species Novo-Zelandicæ et Tasmanicæ, squamis ad quemque lobum geminis.

23. **Struthiola**, *Linn. Mant.* 4. (Belvala, *Adans. Fam.* ii. 285.)—Flores hermaphroditi. Perianthii tubus gracilis; lobi 4, patentes. Squamæ v. glandulæ ad faucem 4, 8 v. 12, angustæ, erectæ, crasso-carnosæ, æquales et subæquidistantes, singulæ annulo pilorum cinctæ. Stamina 4, tubo inclusa, lobis alterna, filamentis brevissimis; antheræ subsessiles, lineares, connectivo dorsali subplano ultra loculos breviter producto, loculis in

facie interiore contiguis. Discus hypogynus 0. Ovarium sessile, 1-loculare; stylus filiformis, stigmate capitato. Fructus parvus, siccus, perianthii basi persistente inclusus v. perianthio demum deciduo intra bracteolas nudus, pericarpio tenuiter membranaceo. Semen compressiusculum, testa crustacea nitida; albumen parcum; cotyledones crassiusculæ.—Frutices suffruticesve ericoidei, ramis sæpius strictis. Folia opposita v. rarius sparsa, parvula, coriacea, sæpius laxe imbricata. Flores albi rubri v. flavi, in axillis superioribus subsessiles, solitarii v. rarius gemini, bracteolis 2 brevibus angustis stipati.

Species ad 20, Africæ australis incolæ. *Meisn. in DC. Prod.* xiv. 567. *Bot. Mag. t.* 222, 1212, 2138. *Andr. Bot. Rep. t.* 113, 119, 139, 149, 334. *Lodd. Bot. Cab. t.* 11, 74, 75, 141. Genus et habitu et characteribus ab omnibus facillime distinctum.

24. **Gnidia,** *Linn. Gen. n.* 487.—Flores hermaphroditi. Perianthii tubus cylindraceus, supra ovarium demum circumscissus; lobi 4, patentes. Squamæ ad faucem 4 v. 8, lobis alternæ. Stamina 8, ad faucem infra squamas affixa, superiora v. omnia breviter exserta, filamentis brevissimis; antheræ oblongæ v. lineares, connectivo angusto. Discus hypogynus 0 v. brevissime annulatus. Ovarium sessile, 1-loculare; stylus filiformis, stigmate capitato. Fructus siccus, parvus, basi perianthii persistente inclusus, pericarpio membranaceo. Seminis testa crustacea; albumen sæpius parcum rarius crassius carnosum; cotyledones crassiusculæ.—Frutices virgati v. ericoidei, ramosi. Folia sæpius parva v. angusta, opposita v. sparsa. Flores albi flavi rubelli v. violacei, ad apices ramorum capitati, rarius ad axillas solitarii, capitulis bracteis latiusculis involucratis v. nudis.

Species editæ ultra 40, quarum 2 v. 3 Africæ tropicæ, cæteræ Africæ australis incolæ. *Meisn. in DC. Prod.* xiv. 580. *Grant in Trans. Linn. Soc.* xxix. *t.* 91. *Bot. Mag. t.* 1463, 1902, 2016, 2761. *Bot. Reg. t.* 2, 19, 624, 757. *Andr. Bot. Rep. t.* 52, 70, 89, 225. *Lodd. Bot. Cab. t.* 7, 29, 1958.

Genus a Meissnero in sectiones 2 ad inflorescentiam dividitur: 1. *Eugnidia*, capitulis terminalibus rarius 1-floris. 2. *Phidia*, floribus in summis axillis solitariis in spicam brevem v. elongatam foliatam v. demum nudam dispositis. Icones supra citatæ omnes ad *Eugnidiam* pertinent.

THYMELINA, *Hoffmans. Verz.* ab Endlichero Gen. Pl. 331 a *Gnidia* distincta fuit squamis faucis 8 liberis nec per paria connatis, sed postea Suppl. iv. ii. 64, iterum cum *Gnidia* junxit.

CANALIA, *F. V. Schmidt, Neue Pfl.* 1793 *n.* 5 (opus a nobis non visum) a Meissnero ad *Gnidiam* refertur.

25. **Lasiosiphon,** *Fresen. in Flora* 1838, 602.—Flores hermaphroditi. Perianthii tubus cylindraceus, supra ovarium demum circumscissus; lobi 5, patentes. Squamæ ad faucem 5 v. 10, lobis alternæ. Stamina 10, ad faucem infra squamas affixa, superiora v. omnia breviter exserta, filamentis brevissimis; antheræ oblongæ v. lineares, connectivo angusto. Discus hypogynus 0 v. brevissime annulatus. Ovarium sessile, 1-loculare; stylus filiformis, stigmate capitato. Fructus siccus, parvus, basi perianthii persistente inclusus, pericarpio membranaceo. Seminis testa crustacea; albumen parcum v. 0 (rarius crasse carnosum ?); cotyledones crassiusculæ.—Frutices habitu *Gnidiæ* v. sæpe majores magisque sericei. Folia opposita v. sparsa. Flores ad apices ramorum dense capitati, capitulis sessilibus v. pedunculatis, bracteis latiusculis sæpe involucratis. Perianthia sæpissime sericeo-pubescentia.

Species ad 25, Africæ australis et tropicæ, Madagascariæ et Asiæ tropicæ incolæ.—*Meisn. in DC. Prod.* xiv. 593. *Wight, Ic. t.* 1859, 1860 (*Gnidia*). *Dcne. in Jacquem. Voy. Bot. t.* 150. *Miq. Anal. Bot. Ind.* ii. *t.* 1. *Kotschy, Pl. Tinn. t.* 19 B.

Genus a *Gnidia* imprimis floribus 5-meris distinctum. *L. scandens*, Meissn., ad *Linostoma* transfertur.

26. **Linostoma,** *Wall. Cat. Herb. Ind. n.* 4203. (Nectandra, *Roxb. Fl. Ind.* ii. 425, *non Roth.*)—Flores hermaphroditi. Perianthii tubus cylindraceus, mox basi ampliatus, supra ovarium continuus; lobi 5, patentes. Squamulæ v. glandulæ ad faucem 10, liberæ v. per paria basi connatæ. Stamina 10, ad faucem infra squamulas affixa, filamentis filiformibus exsertis lobos tamen rarius excedentibus; antheræ ovatæ v. oblongæ, con-

nectivo angusto. Discus hypogynus 0. Ovarium sessile, sæpius villosum, 1-loculare; stylus filiformis, stigmate capitato penicillato. Fructus ovoideus, siccus, durus, perianthio persistente basi aucto v. inflato inclusus v. perianthio fisso stipatus, rarius perianthio deciduo nudatus, pericarpio crustaceo v. fere suberoso. Seminis testa membranacea, pericarpio sæpe adnata; albumen 0; cotyledones crasso-carnosæ.—Frutices laxe ramosi v. scandentes. Folia opposita v. subopposita, plana, membranacea v. coriacea, penninervia. Flores cymulosi, cymulis nunc fere umbelliformibus in paniculam terminalem dispositis. Bracteæ in pedunculo sæpius 2 suboppositæ, demum valde auctæ membranaceæ v. subscariosæ coloratæ.

Species 5 v. 6, quarum 3 v. 4 Indiæ orientalis, 2 Brasiliæ borealis incolæ. *Meisn. in Denkschr. Bot. Gesellsch. Regensb.* iii. *t.* 7, *et in Mart. Fl. Bras.* v. i. *t.* 30.

Characteres essentiales et habitus in speciebus Asiaticis et Americanis eidem, etsi fructus de specie in speciem paullo diversus. Perianthium fructiferum in *L. decandro*, Wall., quam in cæteris minus auctum, a latere fissum sed persistens; in *L. paucifloro*, Griff. (PHALERIA *dalbergioide*. Miq. Fl. Ind. Bat. Suppl. 355) et *L. scandente*, Kurz (ENKLEIA, *Griff. Notul.* iv. 363, *Lasiosiphon scandens*, Meisn.) integrum remanet, fructu appressum; in *L. calophylloide*, Meisn., (LOPHOSTOMA, Meisn. in DC. Prod. xiv. 600) simile, sed circa fructum laxius. Seminis testa in *L. decandro* tenuis, a pericarpio solubilis, in *L. paucifloro*, *L. scandente* et *L. calophylloide* arcte adnata, in *L. ovato*, Meisn., ignota, nec adhuc descripta in *L. Siamense*, Kurz in Flora 1870. 371, specie a nobis non visa.

27. **Dicranolepis**, *Planch. in Hook. Ic. Pl. t.* 798.—Flores hermaphroditi. Perianthii tubus cylindraceus, elongatus, basi demum ampliatus, supra ovarium continuus; lobi 5, patentes. Squamæ ad faucem 10, petaloideæ, basi in annulum subconnatæ, per paria lobis oppositæ iis parum breviores et cum illis patentes. Stamina 10, fauci infra squamas affixæ, filamentis breviter filiformibus; antheræ oblongæ, connectivo dorsali lato, loculis in facie interiore parallelis. Discus hypogynus cupularis, membranaceus v. carnosulus. Ovarium breviter stipitatum, glabrum v. villosum, 1-loculare; stylus elongatus, stigmate oblongo v. clavato. Fructus globosus v. obovoideus, perianthii basi arcte inclusus, parte superiore perianthii emarcida v. decidua; pericarpium indurato-crustaceum. Seminis testa tenuis, pericarpio appressa v. adnata; albumen 0; cotyledones crasso-carnosæ, radicula minima intra basin cotyledonum retracta.—Frutices laxe ramosi. Folia alterna, membranacea, penninervia. Flores ad axillas sessiles, solitarii v. per 2–4 fasciculati.

Species 2. Africæ tropicæ incolæ. *Meisn. in DC. Prod.* xiv. 599.

Genus inflorescentia antherisque fere *Struthiolæ*, habitus cæterum uti characteribus ab ea longe distat. In specie typica flores tenues fere glabri, ad axillas sæpissime solitarii. *D. Mannii*, Baill. Adans. xi. 302, videtur ejusdem varietas, floribus sæpissime fasciculatis nec aliter differt. Species tamen altera in herb. Kew adest, a Mannio lecta, foliis longius acuminatis, floribus multo majoribus dense cano-tomentosis.

28. **Synaptolepis**, *Oliv. in Hook. Ic. Pl. t.* 1074 *et* 1194.—Flores hermaphroditi. Perianthii tubus cylindraceus, elongatus, basi demum ampliatus, supra ovarium continuus; lobi 5, patentes. Squamæ faucis in annulum brevem erectum integerrimum v. brevissime in lobos truncatos fissum connatæ. Stamina 10, fauci infra annulum affixa, filamentis breviter filiformibus; antheræ oblongæ, connectivo dorsali lato, loculis in facie interiore parallelis. Discus hypogynus breviter cupularis, tenuissime membranaceus. Ovarium breviter stipitatum, 1-loculare; stylus filiformis, elongatus, stigmate oblongo. Fructus ovoideus v. oblongus, perianthii basi persistente carnosulo (nisi exocarpio?) inclusus, pericarpio (potius quam endocarpio?) crustaceo. Seminis testa membranacea, laxa (endopleura ad normam ordinis distincta); albumen 0; cotyledones crassiusculæ.—Frutices divaricato-ramosi v. scandentes. Folia alterna, ovata, membranacea v. subcoriacea, penninervia. Flores pauci, in cymulas terminales v. in summis axillis breviter pedunculatas v. subsessiles dispositi.

Species 2. Africæ tropicæ incolæ.

29. **Stephanodaphne**, *Baill. Adans.* xi. 302.—Flores hermaphroditi. Perianthii tubus

cylindraceus, elongatus, lobi 5, patentes. Squamæ faucis in annulum continuum apice patenti-recurvum fimbriato-lobatum connati. Stamina 10, tubo 2-seriatim affixa, inclusa, filamentis brevissimis; antheræ subsessiles, ovatæ, obtusæ. Discus hypogynus 0. Ovarium sessile, hirsutum, 1-loculare. Fructus . . .—Frutices. Folia alterna, ampla. Flores spicati, spicis capitatis v. longe filiformibus. (*Char. ex Baill.*)

Species 2, una ins. Comoro, altera Madagascariæ incola, a nobis non visæ.

TRIBUS II. PHALERIEÆ.

30. **Peddiea,** *Harv. in Hook. Journ. Bot.* ii. 265, *t.* 10. (Cyathodiscus, *Hochst. in Flora* 1842, 240. Psilosolena, *Presl, Bot. Bemerk.* 102.)—Flores hermaphroditi. Perianthii tubus cylindraceus; lobi 4 (rarius 5 ?) breves, patentes, fauce intus nuda. Stamina 8 (rarius 10 ?), tubo inclusa, 2-seriata, filamentis brevissimis; antheræ oblongæ, connectivo inconspicuo. Discus hypogynus cupulatus, integer v. dentatus, ovarium basi cingens. Ovarium glabrum v. apice dense villosum, 2-loculare; stylus breviter filiformis, stigmate depresso-capitato fere disciformi; ovula in loculis solitaria (addito rarius altero abortivo ?). Drupa perianthio deciduo denudata, exocarpio succoso; pyrenæ 2 v. abortu solitariæ, indurato-crustaceæ. Semina in pyrenis solitaria, testa membranacea; albumen parcum v. 0; cotyledones latæ, crassiusculæ, radicula brevi supera.—Frutices glabri. Folia sparsa, subcoriacea v. membranacea. Flores flavo-virentes, in umbellis ad apices ramorum pedunculatis pedicellati. Bracteæ 0.

Species 3 Africanæ, quarum 2 Natalenses, *Meisn. in DC. Prod.* xiv. 528, tertia tropica, *Hook. f. in Journ. Linn. Soc.* vi. 20.

Genus *Phaleriæ* valde affine. Ovarium a Meissnero 1-loculare dicitur, sed in speciminibus pluribus repetiter examinatis ovaria constanter 2-locularia invenimus.

31. **Leucosmia,** *Benth. Bot. Sulph.* 179, *t.* 57.—Flores hermaphroditi. Perianthii tubus cylindraceus elongatus; lobi 5, patentes. Squamæ faucis 5, breves, lobis alternæ. Stamina 5, fauci infra squamas 2-seriatim affixa, vix exserta, filamentis antheris sæpius brevioribus. Discus hypogynus breviter cupulatus, truncatus. Ovarium 2-loculare; stylus filiformis, stigmate capitato. Fructus drupaceus, perianthio deciduo nudus, exocarpio tenuiter carnoso, endocarpio duro sæpe crasso 2-loculari v. abortu 1-loculari. Semina in loculis solitaria, testa tenui: albumen 0; cotyledones crasso-carnosæ.—Arbores fruticesve. Folia opposita. Flores pauci v. rarius numerosi, capitati, capitulis ad nodos vetustos v. in axillis sessilibus v. breviter pedunculatis. Bracteæ ovatæ v. orbiculatæ, capitulum involucrantes, caducissimæ, in speciminibus siccis rarissime adsunt.

Species ad 5, ins. maris Pacifici australis incolæ. *Meisn. in DC. Prod.* xiv. 603. *A. Gray, in Seem. Journ. Bot.* 1865, 305. *Seem. Fl. Vit. t.* 53, 54 (*Drimyspermum*).

32. **Phaleria,** *Jack. in Mal. Misc.* ii. vii. 59. (Drimyspermum, *Reinw. in Syll. Pl. Soc. Ratisb.* ii. 15.)—Flores hermaphroditi. Perianthii tubus cylindraceus, elongatus; lobi 4–5, rarius 6, patentes, fauce intus nuda v. linea transversali obscura notata. Stamina 8–10, rarius 12, 2-seriatim fauci affixa, exserta, filamentis filiformibus; antheræ parvæ, connectivo angusto. Discus hypogynus brevis, cupulatus v. annulatus, sinuatus v. breviter lobatus. Ovarium 2-loculare; stylus filiformis, stigmate capitato. Fructus drupaceus, perianthio deciduo nudus, exocarpio succulento v. carnoso, endocarpio coriaceo v. indurato 2-loculari v. abortu 1-loculari. Semina in loculis solitaria, testa tenui; albumen 0; cotyledones crasso-carnosæ.—Arbores. Folia opposita. Flores in capitulis terminalibus v. rarius lateralibus plurimi sæpe numerosi, sessiles. Bracteæ foliaceæ, capitulum involucrantes, deciduæ.

Species ad 8, Zeylaniæ Archipelagi Malayani et Australiæ incolæ. *Meisn. in DC. Prod.* xiv. 603. *Thw. Enum. Pl. Zeyl.* 251. *Dcne. in Ann. Sc. Nat. ser.* 2, xix. *t.* 1. *A. Gray in Seem. Journ. Bot.* 1865, 304 (*omnes sub Drimyspermo*). *Benth. Fl. Austral.* vi. 38. *Bot. Mag. t.* 5787.

33. **Pseudais**, *Dcne. in Ann. Sc. Nat. ser.* 2, xix. 40.—**Flores hermaphroditi. Perianthium** tubulosum, lobis 5 minimis dentiformibus erectis, fauce intus nuda. **Stamina 10**, tubo 2-seriatim affixa, lobis breviora, filamentis filiformibus; antheræ parvæ, connectivo angusto. Discus . . . . Ovarium 2-loculare; stylus filiformis, stigmate subpeltato. Fructus drupaceus, 2-locularis. Semina in loculis solitaria.—Frutex. Folia opposita, ampla. Flores in capitulo terminali pedunculato numerosi, coccinei. (*Char. ex Gaudich. et Dcne.*)

Species 1, Moluccana, a nobis non visa. *Gaud. in Freyc. Voy. Bot. t.* 44 (*Dais*). Genus *Phaleriæ* evidenter valde affine, nec nisi perianthii lobis minimis erectis differre videtur.

TRIBUS III. AQUILARIEÆ.

34. **Gyrinops**, *Gærtn. Fruct.* ii. 276, *t.* 140. (Lachnolepis, *Miq. in Ann. Mus. Lugd. Bat.* i. 132.)—**Flores** hermaphroditi. Perianthii tubus cylindraceus, tenuis; lobi 5, breves, patentes. Squamæ faucis in annulum glabrum v. pubescentem connatæ. **Stamina** 5, fauci infra squamas affixa, lobis opposita, filamentis brevissimis; antheræ oblongæ, connectivo dorsali lato, loculis in facie interiore parallelis. Discus hypogynus 0. Ovarium longe stipitatum, 2-loculare, in stylum breviter subulatum desinens, stigmate ovoideo. Capsula stipitata, compressa, loculicide 2-valvis. Semina (ex ic. Gærtneri) omnino *Aquilariæ*.—Arbores. Folia alterna, nitidula, coriacea, crebre pennivenia. **Flores** in umbellis ad apices ramorum breviter subpaniculatis pauci, breviter pedicellati. Bracteæ 0.

Species 2, altera Peninsulæ Indiæ orientalis et Zeylaniæ incola, altera Moluccana. *Meisn. in DC. Prod.* xiv. 602. *Wight, Ic. t.* 1850. *Bedd. Fl. Sylv. t.* 303.

35. **Gyrinopsis**, *Dcne. in Ann. Sc. Nat. ser.* 2, xix. 41, *t.* 1.—**Flores hermaphroditi.** Perianthii tubus cylindraceus, crassiusculus; lobi 5, breves, patentes. Squamæ faucis in annulum villosum connatæ. Stamina 10, ad faucem infra squamas affixa, filamentis brevissimis; antheræ oblongæ, connectivo dorsali latiusculo. Discus hypogynus 0. Ovarium breviter stipitatum, villosum, 2-loculare, in stylum brevem desinens, stigmate ovoideo v. subgloboso. Capsula compressa, obovata, loculicide dehiscens, pericarpio coriaceo. Semina *Aquilariæ*.—Arbores. Folia alterna, ampla, coriacea, nitida, crebre pennivenia. Flores in fasciculis axillaribus lateralibusve subsessilibus breviter pedicellati. Bracteæ 0. Perianthium sub fructu sæpius persistens, hinc fissum.

Species 2, altera ins. Philippinarum, altera Assamiæ incola. *Meisn. in DC. Prod.* xiv. 602. Genus *Gyrinopsis* cum *Aquilariæ* arcte connectens. Perianthium prioris, stamina 10 *Aquilariæ*.

36. **Aquilaria**, *Lam. Dict.* ii. 610. (Agallochum, *Lam. Dict.* i. 47, *pro parte*. Ophispermum, *Lour. Fl. Coch.* 280.)—Flores hermaphroditi. Perianthium campanulatum; lobi 5, lati, patentes, tubo æquilongi. Squamæ faucis 5, densè pilosæ, basi in annulum brevissime connatæ. Stamina 10, ad faucem infra squamas affixa, filamentis brevissimis; antheræ oblongæ, connectivo dorsali latiusculo. Discus hypogynus 0. Ovarium subsessile, villosum, perfecte v. imperfecte 2-loculare; stylus subnullus, stigmate magno sessili v. subsessili. Capsula dissepimento contrarie compressa, obovata, loculicide dehiscens, pericarpio duriusculo filamentoso, 2-locularis v. placentis in mediis valvis vix prominulis 1-locularis. Semina in quoque loculo v. quaque placenta solitaria, apicem versus lateraliter affixa, ovoidea, raphe ventrali in appendicem subsuberosam longe caudiformem sub semen compresso-dilatatam dein attenuatam usque ad basin capsulæ descendentem producta, testa crustacea, endopleura crassiuscula, haud tamen albuminosa; cotyledones crassæ, carnosæ.—Arbores. Folia alterna, tenuiter parallele pennivenia. Flores pedicellati, umbellulis subsessilibus axillaribus terminalibusque. Bracteæ 0.

Species 2 v. 3, Archipelagi Malayani et Asiæ orientalis usque ad Chinam incolæ. *Meisn. in DC. Prod.* xiv 601. *Benth. Fl. Hongk.* 297. *Lam. Illustr. t.* 356 (ab icone pessima *Cav. Monad. t.* 224 mutuata) *Colebr. in Trans. Linn. Soc.* xxi. *t.* 21. *Hook. Ic. Pl. t.* 6. *Royle, Ill. Pl. Himal t.* 36. In speciminibus pluribus examinatis *A. Agallochæ*. Lam., ovarium placentis parum prominulis

1-loculare v. imperfecte divisum invenimus; in *A. grandiflora*, Benth., ovarium uti fructus semper perfecte 2-loculare.

GENERA ANOMALA.

37? **Octolepis**, *Oliv. in Journ. Linn. Soc.* viii. 161, t. 12.—Flores hermaphroditi. Perianthii segmenta 4, fere a basi distincta, imbricata, patentia. Squamæ subperigynæ 8, ovatæ, intus dense pilosæ, perianthio breviores. Stamina 8, squamis alterna et longiora, filamentis subulatis; antheræ parvæ, ovatæ, subcordatæ, connectivo angusto. Discus hypogynus 0. Ovarium sessile, ovoideum, dense pilosum, 4-loculare; stylus brevis, stigmate dilatato; ovula in loculis solitaria, pendula. Fructus . . .—Frutex v. arbor parva, libro filamentoso. Folia alterna, ampla, integerrima. Flores parvi, pauci ad axillas fasciculati, brevissime pedicellati. Bracteæ minutæ v. 0.

Species 1, Africæ tropicæ occidentalis incola, quoad affinitates adhuc valde incerta.

38? **Gonystylus**, *Teijsm. et Binn. in Bot. Zeit.* 1862, 265.—Flores hermaphroditi. Perianthium breve, intus strigoso-hirsutum, coriaceum, persistens, laciniis 5 patentibus lanceolatis obtusiusculis. Squamæ 1-seriatæ basi affixæ, setaceæ, filamentiformes, apicibus curvatis. Stamina plurima in fundo calycis circa ovarium seriata, filamentis brevibus; antheræ basifixæ, 2-loculares, longitudinaliter dehiscentes. Ovarium 5–4-loculare; stylus filiformis, geniculato-flexuosus, stigmate clavato 2-lobo; ovula in loculis solitaria, anatropa. Drupa 4-gono-subglobosa, sarcocarpio fibroso, 5–4-locularis. Semina columnæ centralis apice inserta, pendula, oblonga, curvata, exalbuminosa.—Arbor excelsa, ramis glabris, gemmis sericeo-tomentosis. Folia alterna, coriacea, rigida, pennivenia, glabra. Spicæ axillares terminalesque, floribus umbellulatis longe pedicellatis. Alabastrum globosum, *Piso* fere majus. (*Char. ex Teijsm. et Binn.*)

Species 1, Javana, a nobis non visa. *Miq. in Ann. Mus. Lugd. Bat.* i. 132, *t.* 4.

ORDO CXLVI. **PENÆACEÆ.**

Endl. Gen. 334. Lindl. Veg. Kingd. 577. A. Juss. in Ann. Sc. Nat. ser. 3, vi. 15. Baill. Hist. Pl. vi. 98.

Flores hermaphroditi, regulares. *Perianthium* inferum, tubo ovoideo v. cylindraceo; lobi 4, valvati v. margine reduplicati. *Stamina* 4, fauci affixa, lobis alterna, filamentis brevibus. *Antheræ* cum filamento continuæ, erectæ, 2-loculares, loculis connectivo crasso-carnoso introrsum adnatis, rima longitudinali dehiscentibus. *Discus* hypogynus 0. *Ovarium* sessile, 4-loculare; stylus terminalis, teres v. 4-gonus, apice truncatus, stigmate terminali adnato cruciatim 4-lobo. *Ovula* in loculis 2 v. 4, anatropa, ascendentia v. pendula. *Capsula* perianthio persistente inclusa, loculicide 4-valvis. *Semina* in loculis sæpius abortu solitaria, testa crustacea. *Albumen* 0. *Embryo* crasso-carnosus, apice breviter 2-lobus, cæterum integerrimus, cotyledonibus versimiliter fere ad apicem conferruminatis; radicula brevissima, infera v. in semine pendulo supera; plumulam in speciminibus examinatis haud deteximus.

Frutices ramosissimi. Folia opposita, numerosa, parvula, integerrima, coriacea. Stipulæ 0. Flores in axillis superioribus solitarii, subsessiles, bracteis 2 v. 4 per paria oppositis stipati.

Species ad 20, Africæ australis incolæ. Ordo nulli arcte affinis. Ob habitum characteresque nonnullos *Thymelæaceis* approximatur, sed æstivatione perianthii, antheris, ovario et fructu recedit. A Lindleyo cum *Rhamneis* comparatur, ob staminum situ, sed stamina lobis perianthii isomera et alterna etiam in *Thymelæaceis* (*Drapete* et *Struthiola*) observantur. *Geissoloma* a charactere supra dato pluribus notis recedit, sed species unica habitu *Penæaceis* simillima, vix pro ordine proprio habenda.

CONSPECTUS GENERUM.

1. **Penæa.** Perianthii lobi plani v. margine parum recurvi. Stylus 4-alatus v. 4-angulatus. Ovula 2, a basi loculorum erecta.

2. **Sarcocolla.** Perianthii lobi margine valde recurvi. Stylus teres. Ovula 2 v. 4, a basi loculorum erecta.

3. **Endonema.** Perianthii lobi subplani. Stylus teres. Ovula 4, medio loculo affixa, 2 ascendentia, 2 pendula.

GENUS ANOMALUM.

4. **Glischrocolla.** Perianthium 4-partitum, segmentis imbricatis. Stamina 8. Ovarium 4-lobum, ovulis in loculis 2 pendulis. Capsula subdrupacea.

1. **Penæa,** *Linn. Gen. n.* 138.—Perianthii tubus oblongo-cylindraceus v. ovoideus; lobi valvati, margine plani v. leviter recurvi. Antherarum loculi ad basin connectivi crassi carnosi breves, obliqui. Ovarium 4-angulatum v. 4-sulcum; stylus 4-gonus v. 4-alatus, angulis alisve loculis alternis ramis stigmatis coronatis; ovula in loculis gemina, a basi loculi erecta.—Fruticuli ramosissimi, glabri, dense foliati. Folia opposita, sessilia, integerrima, coriacea. Flores flavescentes v. rubicundi, ad apices ramorum in axillis solitarii, sessiles, spicam foliatam formantes, foliis floralibus caulinis conformibus v. latioribus brevioribusque. Bracteæ sub flore 2 v. 4 per paria oppositæ.

Species 9, Africæ australis incolæ. *A. Juss. in Ann. Sc. Nat. ser.* 3, vi. 22, 23, *t.* 1. *A. DC. Prod.* xiv. 481, 486 (*Penæa et Stylapterа*). *Vent. Jard. Malm. t.* 87. *Lodd. Bot. Cab. t.* 1770.

Stylapterа, *A. Juss. l.c.*, vix pro sectione distincta habenda videtur, stylo 4-angulato nec 4-alato.

2. **Sarcocolla,** *Kunth in Linnæa*, v. 677.—Perianthii tubus cylindraceus, sæpius elongatus; lobi valvati, marginibus recurvis fere reduplicatis. Antherarum loculi in facie interiori connectivi crassi, ei æquilongi v. parum breviores. Ovarium extus læve, in stylum teretem desinens, stigmate terminali parvo cruciatim 4-lobo; ovula in loculis 2 v rarius 4, omnia a basi loculi erecta.—Fruticuli habitu et inflorescentia *Penææ*. Flores sæpius majores, et in specie typica folia floralia majora colorata verniciflua.

Species 9 v. 10, Africæ australis incolæ. *A. DC. Prod.* xiv. 487 *ad* 489 (*Brachysiphon et Sarcocolla*). *Bot Reg. t.* 106 (*Penæa*).

Brachysiphon, *A. Juss. in Ann. Sc. Nat. ser.* 3. vi. 24, *t.* 2, generice distinctus fuit a *Penæa* perianthii lobis margine valde recurvis et stylo terete, a *Sarcocolla* perianthii tubo brevi, staminibus inclusis. Inter species in Prodromo enumeratas *B. imbricatus*, Juss. (*Penæa*, Bot. Mag. t. 2809) antheras exhibet *Penææ*, ovarium et stylum *Sarcocollæ*. In *B. acuto*, A. Juss., perianthii tubus elongatus et antheræ *Sarcocollæ* etsi habitus diversus. *B. speciosus*, Sond., omnino ad *Sarcocollam* referendus videtur. In specie typica *Sarcocollæ*, *S. squamosa*, Endl., saltem in speciminibus Burchellianis n. 8188, ovula 4 invenimus in quoque loculo, omnia tamen e basi erecta nec medio loculo affixa ut in *Endonemate*.

3. **Endonema,** *A. Juss. in Ann. Sc. Nat. ser.* 3, vi. 26, *t.* 3.—Perianthii tubus elongatus, latiuscule cylindraceus, subangulatus; lobi valvati, subplani. Staminum filamenta antheris vix breviora; antherarum loculi connectivo crasso vix breviores. Ovarium extus læve, in stylum teretem desinens, stigmate terminali parvo cruciatim 4-lobo; ovula in loculis 4, medio loculo affixa, 2 collateralia ascendentia, 2 descendentia.—Frutices habitu *Penææ*, flores tamen secus ramos ad axillas foliorum caulinorum solitarii v. gemini brevissime pedicellati. Bracteæ sub quoque flore 4, per paria oppositæ, diu persistentes v. caducissimæ.

Species normales 2, Africæ australis incolæ. *A. DC. Prod.* xiv. 491.

Glischrocolla, *A. DC. Prod.* xiv. 490, species a nobis non visa, a Jussieuo ad *Sarcocollam* relata, pluribus notis medium tenet inter *Sarcocollam* et *Endonema*; inflorescentia et flores prioris, ovarii structura *Endonematis*, quocum junxit Baillon Hist. Pl. vi. 99. Cæterum genera tria limitibus valde incertis separantur, characteribus fere de specie in speciem discedentibus.

GENUS ANOMALUM.

4. **Geissoloma,** *Lindl. ex Kunth in Linnæa*, v. 678.—Perianthium tubo brevissimo sub-4-partitum, segmentis latis 2-seriatim oppositis, 2 exterioribus vix basi connatis. Stamina 8, segmentis breviora, filamentis tenuibus leviter complanatis basi in annulum brevissimum ad basin perianthii connatis; antheræ ovato-cordatæ, versatiles, connectivo inconspicuo, loculis dorso contiguis. Ovarium 4-lobum, 4-loculare, lobis in stylos distinctos apice cohærentes desinentibus, stigmatibus minimis terminalibus; ovula in quoque loculo 2, ab apice pendula. Fructus subdrupaceus, 4-locularis, endocarpio cruciatim 4-lobo, exocarpio tenuiter carnoso, lobis compressis, (indehiscentibus ?). Semina abortu sæpe in toto fructu solitaria, oblonga, compressiuscula, testa nitida crustacea albida; albumen 0; cotyledones carnosæ.—Frutex, habitus folia et flores axillares brevissime pedicellati *Endonematis*. Bracteæ 4, per paria oppositæ, diu persistentes.

Species 1, austro-Africana. *Juss. in Ann. Sc. Nat. ser.* 3, vi. 27, *t.* 4. *A. DC. Prod.* xiv. 492. *Baill. Hist. Pl.* vi. 49. *Schnitzl. Iconogr. t.* 112*.

Affinitas generis cum *Celastraceis* a Baillonio indicata nobis effugit.

ORDO CXLVII. ELÆAGNACEÆ.

Endl. Gen. 333. Lindl. Veg. Kingd. 257. A. Rich. Monogr. Elæagn. in Mem. Soc. Hist. Nat. Par. i. 375, t. 24. Baill. Hist. Pl. ii. 487.

Flores hermaphroditi v. unisexuales sæpiusque dioici. *Perianthium* in flore ☿ v. ♀ tubulosum, supra ovarium constrictum persistensque, superne deciduum, 2- v. 4-lobum v. rarius truncatum, in flore ♂ pars inferior deest. *Stamina* ad faucem perianthii v. in flore ♂ ad basin affixa, 4 lobis alterna v. 8 lobis alterna et opposita; filamenta libera, sæpius brevia. *Antheræ* dorsifixæ, oblongæ, 2-loculares, loculis parallelis contiguis rima longitudinali 2-valvatim dehiscentibus. *Staminodia* in flore ♀ 0. *Ovarium* in fundo perianthii sessile, 1-loculare. *Stylus* terminalis, linearis v. superne dilatatus, obliquus, uno latere stigmatosus. *Ovulum* 1 a basi ovarii erectum, anatropum. *Nux* intra perianthii basin persistentem incrassatam baccatamque arcte inclusa. *Pericarpium* tenuiter membranaceum. *Semen* erectum, testa crustacea v. indurata. *Albumen* perparcum membranaceum v. 0. *Embryo* rectus, cotyledonibus crassis carnosis, radicula infera brevissima.

Arbores fruticesve, indumento lepidoto v. rarius stellato. Folia alterna v. opposita, integerrima, tenuiter pennivenia. Flores ad axillas v. rarius ad nodos defoliatos solitarii fasciculato-spicati v. racemosi. Bracteæ parvæ, deciduæ.

Species 16, regionum temperatarum hemisphærii borealis utriusque orbis incolæ, etiam in Asia tropica usque ad Australiam extensæ.

Ordo pluribus notis *Thymelæaceis* affinis, facillime tamen ovulo erecto, sæpiusque indumento distinguitur.

CONSPECTUS GENERUM.

1. ELÆAGNUS. Flores hermaphroditi. Stamina 4. Folia alterna.—*Eur.*, *Asia*, *Austral.*, *Amer. bor.*

2. HIPPOPHAË. Flores unisexuales, sæpissime dioici. Stamina 4. Folia alterna.—*Amer.*, *Asia temper. et media.*

3. SHEPHERDIA. Flores dioici. Stamina 8. Folia opposita.—*Amer. bor.*

GENERA EXCLUSA.

CONULEUM, Rich., est **Monimiacea,** supra, 143.

ÆXTOXICON, Ruiz et Pav., a nonnullis ob indumentum lepidotum ad **Elæagnaceas** relata, infra sub **Euphorbiaceis** recensetur.

1. **Elæagnus,** *Linn. Gen. n.* 159. (**Lepargyræa,** *Rafin. ex Steud.*)—Flores hermaphroditi. Perianthium basi persistente oblongum v. globosum, supra constrictionem campanulatum v. infundibulare, apice valvatim 4-fidum deciduum, intus sæpius supra constrictionem annulo prominente notatum. Stamina 4, ad faucem inserta, filamentis brevibus interdum basi annulo prominulo connexis. Stylus linearis, perianthio brevior, superne longe unilateraliter stigmatosus, parum dilatatus. Perianthii fructiferi basis persistens baccata v. rarius subsicca, strato interiore tenacissimo; pericarpium tenuiter membranaceum. Semen (pyrena, *Nees, Schlecht.*) conforme, testa nitida crustacea v. indurata; albumen in seminibus examinatis 0, ex auctoribus interdum tenue.—Arbores fruticesve indumento lepidoto v. stellato sæpe argenteo. Folia alterna, petiolata, integerrima. Flores ad axillas breviter pedicellati, ad normam solitarii v. 2-3-ni, ebracteati, interdum fasciculati v. fasciculi in ramulos breves plus minus foliatos producti. Perianthium intus sæpius flavum v. album.

Species a Schlechtendalio enumeratæ 27, a Maximoviczio ad 12 reductæ, Europæ australis, Asiæ temperatæ et tropicæ, Australiæ et Americæ borealis incolæ. *Schlecht. in DC. Prod.* xiv 609. *Maxim. in Bull. Acad. Imp. Sc. Petersb.* xv. 377; *Mel. Biol.* vii. 558. *A. Rich. Monogr. t.* 24. *Nees, Gen Fl. Germ. Monochlam. n.* 43; *Reichb. Ic. Fl. Germ. t.* 549. *Sibth. Fl. Græc. t.* 152. *Lindl. in Act Soc. Sc. Fenn.* x. *t.* 3. *Pall. Fl. Ross. t* 4, 5. *Royle, Illustr. Bot. Himal. t.* 81. *Wight, Ic. t.* 1856. *Brand. For. Fl. t.* 46. *Bot. Reg t.* 1156 *et* 1843, *t.* 51.

OCTARILLUM, *Lour. Fl. Cochinch.* 90, ex charactere dato videtur *Elæagnus* pericarpio membranaceo pro arillo descripto.

2. **Hippophaë,** *Linn. Gen. n.* 1106.—Flores unisexuales, sæpissime dioici. Fl. ♂: Perianthium tubo subnullo membranaceum, in alabastro globosum, fere ad basin valvatim 2-partitum. Stamina 4 v. rarius abortu pauciora, filamentis brevissimis. Ovarii rudimentum 0. Fl. ♀: Perianthium oblongum, supra ovarium breviter contractum, brevissime v. obscure 2-lobum. Ovarium inclusum; stylus basi breviter tenuis inclususque, superne incrassatus, longiuscule exsertus, uno latere v. fere undique stigmatosus. Perianthium fructiferum baccatum, globosum, clausum; pericarpium tenuiter membranaceum. Semen (pyrena, *Nees, Schlecht.*) conforme, testa nitida crassa dura sublignosa; albumen tenue v. prope basin leviter incrassatum.—Frutex saliciformis, undique usque ad perianthium squamis lepidotis v. pilis stellatis dense obtectus. Folia alterna, angusta. Flores utriusque sexus ad axillas bractearum deciduarum solitarii, in spicas v. racemos breves conferti, ♂ sessiles, spica amentiformi post anthesin decidua rarius in ramulum foliatum v. spinescentem excurrente; ♀ pedicellati, racemi rhachi mox excrescente in ramum foliatum v. spinescentem, fructibus ad basin rami glomeratis.

Species 1, in Europa et Asia temperata et media præsertim montana, ad littora maris v. ripas fluviorum late dispersa. *Schlecht. in DC. Prod.* xiv. 607. *A. Rich. Monogr. t.* 24. *Gærtn. Fruct.* i. *t.* 42. *Nees, Gen. Fl. Germ. Monochl. n.* 44. *Reichb. Ic. Fl. Germ. f.* 549. *Pall. Fl. Ross. t.* 68.

3. **Shepherdia,** *Nutt. Gen. Pl. N. Amer.* ii. 240; *N. Amer. Sylv. t.* 35. (**Leptargyreia,** *Rafin. ex Schlecht.*)—Flores dioici. Fl. ♂: Perianthium tubo subnullo in alabastro globosum, valvatim 4-partitum. Stamina 8, filamentis antheris æquilongis, glandulis globosis totidem alternis. Ovarii rudimentum 0. Fl. ♀: Perianthium ovoideo-oblongum, supra ovarium contractum, limbo valvatim 4-lobo deciduo. Glandulæ 8 ad faucem tubi. Ovarium perianthii basi inclusum; stylus e tubo vix exsertus, limbo brevior, stigmate oblique ovato v. orbiculato patente. Perianthii fructiferi basis persistens baccata; pericarpium tenuiter membranaceum. Semen conforme, testa nitida crustacea; albumen perparcum membranaceum v. 0.—Frutices v. arbusculæ lepidotæ. Folia opposita, petiolata, oblonga, integerrima. Flores parvi, brevissime spicati v. racemosi, secus rhachin ad axillas bractearum parvarum oppositi, spicis ♂ sæpius ∞-floris ♀ 2-floris ad axillas foliorum v. sæpius ad nodos defoliatos sessilibus, rhachi gemma foliacea terminata rarius in ramulum excrescente.

Species 3, Americæ borealis incolæ. *Schlecht in DC. Prod.* xiv. 608. *Parry in Amer. Naturalist,* ix. 350. *A. Rich. Monogr. t.* 24. *Hook. Fl. Bor. Amer. t.* 178.

Ordo CXLVIII. LORANTHACEÆ.

Endl. Gen. 799. Lindl. Veg. Kingd. 789.

Flores regulares, hermaphroditi v. unisexuales. *Perianthium* duplex v. simplex. *Calycis* v. perianthii simplicis tubus ovario adnatus, in flore ♂ brevis solidus v. vix ullus; calycis limbus annularis v. cupulatus, integerrimus v. breviter dentatus. *Petala* v. perianthii simplicis limbi segmenta 3–6, rarius 2, valvata, libera v. breviter v. alte in tubum perfectum v. postice fissum coalita. *Stamina* tot quot petala v. segmenta, eorum basi v. centro affixa iisque breviora v. rarius æquilonga; filamenta filiformia v. varie incrassata v. abbreviata v. 0. *Antheræ* basi v. dorso affixæ, ad normam 2-loculares loculis parallelis v. divergentibus rima longitudinali 2-valvatim dehiscentibus, interdum vero loculis varie confluentibus 1-loculares poro v. rima transversa dehiscentes, v. jam in alabastro explanatæ facie ∞-porosæ v. ∞-locellatæ. *Discus* epigynus v. in flore ♂ intrastaminalis, carnosus, parum prominulus v. 0. *Staminodia* in flore ♀, ovarii rudimentum in flore ♂ rarissime adsunt. *Ovarium* floris ☿ v. ♀ inferum, ante fecundationem solidum apparet v. in centro textura tenuiore plus minus distincte (in speciminibus siccis) cavum, ovulo sæpissime a substantia ovarii non rite distinguendum, etsi a variis auctoribus nunc erectum nunc pendulum v. lateraliter affixum dicitur. *Stylus* simplex, filiformis v. abbreviatus nunc brevissimus v. subnullus, centralis, stigmate terminali indiviso obtuso v. capitato interdum in ovario sessili. *Fructus* baccatus v. drupaceus rarius subsiccus; pericarpium sæpius crassum, visco tenacissimo repletum, mesocarpio carnoso v. succulento, endocarpio tenui v. crustaceo rarius indurato, indehiscens v. rarissime prope basin circumscissus. *Semen* unicum, sæpius ovoideum v. globosum, plus minus uno latere v. undique endocarpio adhærens, testa nulla. *Albumen* sæpius copiosum, crassum, rarius 0 v. tenue et ab endocarpio non distinguendum. *Embryo* in centro albuminis teres v. rarius 4-gonus, nunc albumine inclusus, nunc radicula supera breviter exserta, et interdum embryones ad 3 in eodem albumine observantur.

Frutices in arboribus parasitici v. rarissime arbores v. frutices erecti terrestres. Folia opposita v. rarius alterna, integerrima, plana sæpiusque crassiuscula, in nonnullis generibus v. speciebus ad squamas parvas v. dentes parum prominentes reducta. Stipulæ 0. Gemmæ foliiferæ interdum squamis imbricatis obtectæ, quæ cito deciduæ v. ad basin innovationum persistentes. Inflorescentia varia, racemosa spicata v. fasciculata nec paniculata. Flores singuli v. florum ternationes bractea sæpius squamiformi et interdum bracteolis 2 stipati, rarius omnino ebracteati, perianthio nunc elongato specioso pulchreque colorato, nunc parvo virescenteque v. in generibus nonnullis minuto.

Species ad 500, per regiones tropicas utriusque orbis latissime dispersæ, in temperatis tam borealibus quam australibus rariores.

Ordo *Santalaceis* valde affinis et a Baillono, Adansonia ii. et iii. cum iis in unum conjunctus, ovario tamen ante fecundationem ovulum nullum distinctum ostendente ab omnibus Dicotyledoneis Angiospermis differt. Cæterum de ovarii structura confer Decaisne in Nouv. Mem. Acad. Sc. Brux. xiii. 1, t. 1 ad 3; Griffith in Trans. Linn. Soc. xviii. 71, t. 4 ad 11, et xix. 171, t. 19 ad 21; Hofmeister in Abhandl. K. Sächs. Ges. Wissensch. Leipzig, vi. 539, t. 1 ad 8.

FORMÆ ABNORMES.

Arbores fruticesve terrestres in *Nuytsia*, in *Loranthi* sect. *Gaiadendro*, et interdum in speciebus aliis perpaucis *Loranthi*.

Perianthium floris ♂ deest in *Antidaphne*.

Fructus prope basin circumscissus in *Arceuthobio*.

Albumen deest v. a pericarpio non distinguendum in *Loranthi* sect. *Aetantho* et *Psittacantho* et in *Lepidocerate*.

CONSPECTUS GENERUM.

Tribus I. Euloranthеæ. Flores hermaphroditi v. abortu dioici. Perianthium duplex, calycis tubo adnato, limbo plus minus distincto annulari v. breviter cupulato.

1. NUYTSIA. Fructus sulsiccus, late 3-alatus.- *Australia austro-occid.*

2. LORANTHUS. Fructus non alatus sæpius baccatus v. drupaceus.—*Area tota ordinis Amer. bor. excepta.*

Tribus II. Visceæ. Flores omnes unisexuales. Perianthium simplex, calycis margine nullo conspicuo.

* *Antheræ in medio segmento sessiles, adnatæ v. medifixæ et demum explanatæ.*

3. VISCUM. Flores ad axillas v. ad apices ramorum fasciculati, rarius solitarii. Antheræ latæ, adnatæ, facie interiore ∞-porosæ.—*Europa, Asia, Africa, Australasia.*

4. ARCEUTHOBIUM. Flores in axillis squamarum oppositarum connatarum utrinque solitarii. Antheræ medifixæ, rima transversa dehiscentes, demum orbiculatæ. Fructus demum basi circumscissus.—*Europa, Asia occid., Amer. bor., Mexico.*

5. DENDROPHTHORA. Flores inter articulationes spicæ ad utrumque latus rhacheos 1-seriatim (rarius brevissime 2-seriatim) superpositi. Antheræ medifixæ, rima transversa dehiscentes, demum orbiculatæ. -*Ind. occid., Amer. centr., Columbia.*

** *Antheræ ad basin segmentorum filamento brevissimo fultæ v. subsessiles, erectæ.*

6. PHORADENDRON. Flores inter articulationes spicæ ad utrumque latus rhacheos 2-∞-seriatim superpositæ, rarius in spica brevissima 3-4. Antheræ vertice 2-loculares, loculis longitudinaliter dehiscentibus.—*Amer. bor. et austr.*

7. NOTOTHIXOS. Capitula 3-7-flora, in racemo v. spica opposita v. in pedunculo solitaria, inflorescentia in dichotomiis terminali. Antheræ vertice transversim dehiscentes, obscure ∞-locellati. Fruticuli aureo-tomentosi v. canescentes, foliis oppositis.—*Zeylania, Australia.*

8. GINALLOA. Verticillastri 2-10-flori, in spicis axillaribus terminalibusve dissiti. Antheræ distincte 2-loculares. Frutices glabri, foliis oppositis.—*Asia trop.*

9. EREMOLEPIS. Spiculæ parvæ, unisexuales, ad axillas sessiles. Antherarum loculi distincti paralleli. Folia alterna.- *Amer. austr., Ind. occid.*

10. EUBRACHION. Spiculæ androgynæ, in ramis aphyllis alternæ. Antherarum loculi distincti paralleli. Ramuli novelli squamis alternis peltatis instructi.—*Brasilia, Uruguay.*

*** *Filamenta filiformia, antheris 2-locularibus multo longiora.*

11. TUPEIA. Perianthium fl. ♂ 4-5-partitum. Discus 0. Stylus columnaris. Albumen copiosum. Folia opposita.—*Nov. Zel.*

12. LEPIDOCERAS. Perianthium fl. ♂ 4-5-partitum. Discus carnosus. Stylus abbreviatus. Albumen 0. Folia opposita.—*Peruvia, Chile.*

13. ANTIDAPHNE. Perianthium in fl. ♂ 0. Discus carnosus. Stylus brevissimus. Albumen copiosum. Folia alterna.-- *Columbia, Peruvia.*

GENERA EXCLUSA.

HENSLOWIA, Blume, et MYZODENDRON, Banks, frutices parasitici olim sub *Loranthaceis* inclusi, ob ovarii structuram nunc ad **Santalaceas** referentur.

TRIBUS I. EULORANTHEÆ.

1. **Nuytsia,** *R. Br. in Journ. Geogr. Soc.* i. 17; *Bot. Works*, i. 308.—Flores hermaphroditi. Perianthium duplex. Calycis tubus ovario adnatus; limbus parvus, inæqualiter 6-dentatus. Petala 6, linearia, libera, erecta, apice breviter patentia. Stamina basi petalorum affixa, filamentis filiformibus; antheræ ovato-oblongæ, dorsifixæ, versatiles, loculis parallelis distinctis longitudinaliter dehiscentibus. Discus 0. Ovarium inferum ad normam ordinis; stylus elongatus, stigmate parvo terminali. Fructus subdrupaceus, extus alis 3 longitudinalibus latiusculis coriaceis instructus, endocarpio intus lævi. Embryo in albumine copioso carnoso tenuis, rectus, cotyledonibus 2-4 inæqualibus radicula supera longioribus.—Arbor terrestris, glaberrima. Folia alterna, linearia, crassa. Flores ternatim intra bracteam bracteolasque sessiles, ternationibus pedicellatis racemosis, racemis densæ floribundis, in axillis summis v. ad apices ramorum confertis.

Species 1, Australiæ austro-occidentalis incola. *Benth. Fl. Austral.* iii. 387. *Labill. Pl. Nov.*

Holl. t. 113 (*Loranthus*). *Lindl. Swan Riv. App. t.* 4. Genus a *Loranthi* sect. *Gaiadendro* vix nisi fructu differt.

2. **Loranthus,** *Linn. Gen. n.* 443.—Flores hermaphroditi v. abortu dioici. Perianthium duplex. Calycis tubus ovario adnatus ; limbus brevis, truncatus v. 4–6-dentatus, interdum ad marginem angustum reductus v. vix prominulus. Petala 4-6, valvata, nunc breviter v. alte in tubum rectum v. incurvum æqualem v. dorso altius fissum coalita, nunc a basi libera v. per anthesin soluta, tubo intus nudo v. rarius prope basin squamis 5 supra ovarium conniventibus staminibus oppositis v. altius costis longitudinalibus inter filamenta prominentibus crispisque (e marginibus induplicatis petalorum) instructo ; lobi v. petalorum apices sæpius patentes v. recurvi, plani v. apice concavi. Stamina ad basin loborum corollæ v. partis patentis petalorum affixa, corollam non excedentia, filamentis filiformibus v. crassiusculis sæpius usque ad basin corollæ distincte decurrentibus, interdum usque ad apicem adnatis v. per anthesin elastice involutis ; antheræ ovatæ oblongæ v. lineares, basi v. dorso affixæ, erectæ immobilesque v. versatiles, loculis parallelis discretis v. arcte contiguis, interdum vix distinctis et mox confluentibus, rima v. valvis longitudinalibus lateraliter v. introrsum dehiscentibus. Discus 0. Ovarium inferum ad normam ordinis ; stylus columnaris filiformis v. rarius contortus, stigmate terminali obtuso v. capitato indiviso. Fructus baccatus v. drupaceus, globosus ovoideus v. rarius oblongus, calycis limbo dum adsit, rarissime corollæ reliquiis coronatus ; pericarpium nunc vix in stratus distinctos separandus, undique carnosus intusque viscifluus, nunc epicarpio (calycis tubo ?) membranaceo v. herbaceo, mesocarpio crasso succulento carnoso v. lacunoso copioseque viscifluo, endocarpio carnoso membranaceo crustaceo v. rarius indurato, intus lævi v. processubus laminisve in sulcos seminis intrusis instructo. Semen lateraliter affixum v. undique pericarpio adhærens, testa 0 ; albumen copiosum carnosum v. (in *Aetantho* et *Psittacantho*) 0, nisi ad pelliculum a pericarpio non separandum reductum ; embryo teres v. (in *Eupsittacantho*) tetraqueter, sæpissime carnosus, crassus v. tenuis, in centro albuminis rectus, radicula supera interdum ex albumine leviter prominula, cotyledonibus 2 rarius 4 æqualibus radicula sæpius longioribus.—Frutices in arboribus parasitici v. rarius (in *Gaiodendro*) arbores fruticesve terrestres. Folia opposita v. nonnulla rarius omnia alterna v. verticillata, integerrima, sæpe crassa v. carnosa, pennivenia v. rarius 3–5-nervia, venis tamen præter costam sæpe inconspicuis. Flores parvi v. longi, sæpius pulchre colorati, flavescentes aurantiaci v. rubri, rarius albi v. virescentes, singulatim v. ternatim spicati racemosi v. cymosi, inflorescentiis axillaribus v. ad nodos vetustos rarius terminalibus. Bractea sub flore solitario v. sub ternatione sæpissime adest squamiformis, concava v. oblique cupulata ; bracteolæ 2 intra bracteam, sub flore solitario oppositæ, v. in ternatione sub floribus lateralibus, in pluribus sectionibus adsunt liberæ v. cum bractea coalitæ, in aliis omnino desunt ; flos centralis ternationis sæpius ebracteatus, interdum vero omnes bracteola concava stipati.

Species ad 330, per regiones calidiores utriusque orbis late dispersæ, extra tropicos perpaucæ, in Europa australi, Asia temperata, Africa boreali et australi, Australia, Nova Zelandia, ins. maris Pacifici et America australi ; in America boreali desunt. *DC. Prod.* iv. 286, 671. *Walp. Rep.* ii. 439, 940 v. 937 ; *Ann.* i. 362, ii. 730, v. 92. *Blume Fl. Jav. Lor.* 11, *cum tabb.* 23. *Harv. Fl. Cap.* ii. 574. *Oliv. in Journ. Linn. Soc.* vii. 97. *Kurz, For. Fl. Brit. Burm.* ii. 314. *Benth. Fl. Austral.* iii. 388. Confer etiam *Griff. in Trans. Linn. Soc.* xviii. *t.* 4 *ad* 9 *et* xix. *t.* 19 *ad* 21.

Genus polymorphum, a Martio, Blumeo nuperque ab Eichlero in plura divisum, quæ tamen iterum a plerisque botanicis in unum juncta sunt, et genus in integrum servatum (uti *Ficus*, *Euphorbia*, etc.) facile dignoscitur. Catervæ insigniores sectiones sequentes formant, quarum aliæ characteribus sat definitis sed non semper naturalibus et sæpe observatu difficilibus distinguuntur, aliæ potius habitu v. inflorescentia separatæ, vix limitibus certis definiuntur :—

A. *Loranthi gerontogei, antheris non versatilibus, erectis basifixisque* (*excepta* Loxanthera).

* *Petala per anthesin a basi soluta.*

1. *Euloranthus.* Flores parvi (sæpius 1–3 lin.). Bractea squamiformis v. cava ; bracteolæ 0.

Antheræ ovatæ v. breviter oblongæ, basi obtusæ, loculorum valva interiore minore v. obsoleta, interdum iis *Struthantherum* nonnullorum quodammodo accedentes. Subsectiones 3 distinguuntur:—

a. Europæcola. Spica terminalis, floribus secus rhachin per paria dissitis dioicis. Sp. 1 (*L. europæus*, Linn.), *Jacq. Fl. Austr. t.* 30.

b. Baratranthus, Korth. Inflorescentia axillaris v. lateralis, floribus sparsis fasciculatisve sessilibus. Sp. 5 v. 6 Asiaticæ. *L. odoratus*, Wall., *L. Grevinkii*, Buhse, Transk. und Pers. Pfl. 106. et forte *L. Lambertianus*, Schult., floribus 6-meris spicatis hermaphroditis, et *L. nodiflorus*, Thw., cum specie e Moulmeyn (an *L. axanthus*, Korth?) floribus fasciculatis sessilibus 4-meris hermaphroditis v. dioicis. BARATRANTHUS, *Miq. Fl. Ind. Bat.* i. i. 834.

c. Heterostylis. Flores ad axillas laxe cymulosi, hermaphroditi. Stylus crassus, flexuosus. *L. micranthus*, Hook. f., e Nova Zelandia.

2. *Phœnicanthemum.* Flores parvuli (2-6 lin., in una specie 8–9 lin.), hermaphroditi, 5-meri v. rarius 4-meri, in spicis racemisve axillaribus v. lateralibus secus rhachin sparsi, pedicellati v. subsessiles. Bractea squamiformis; bracteolæ 0. Corolla in alabastro sæpius medio attenuata, apice clavata, petalorum marginibus sæpe inter filamenta induplicatis. Antheræ oblongæ, erectæ, cum filamento continuæ, loculis distinctis. Species ad 16, omnes Asiaticæ, nonnullæ inter se ulterius comparandæ. Hic includuntur: *L. coccineus*, Jack., Hook. Bot. Misc. i. t. 58; *L. erythrostachys*, Wall.; *L. Wallichianus*, DC., Wight, Ic. t. 143; *L. pentapetalus*, Wall. Pl. As. Rar. t. 225, Blum. Lor. t. 14; *L. Hookerianus*, W. et Arn.; *L. Arnottianus*, Wight; *L. Bennettianus*, Miq (*L. siamensis*, Kurz); *L. pulcher*, DC., a quo *L. Lijndenianus*, Zoll., vix differt specifico racemis in summis axillis longis sæpe pseudoterminalibus); *L. obtusatus*, Wall., Wight. Illustr. t. 119 (species floribus 6–8 lin. longis insignis); specimina Cumingiana ex ins. Philippinis n. 1949 (LANTHORUS, *Presl, Epimel. Bot.* 256), et n. 1975. PHŒNICANTHEMUM, *Miq. Fl. Ind. Bat.* i. i. 823. HELIXANTHERA, *Lour. Fl. Coch.* 142 *ex char.*

L. ligustrinus, Wall., quoad corollam et antheras *Phœnicanthemo* convenit, sed flores vix racemosi, pedunculis ad axillas brevibus v. parum elongatis laxe 3–5-floris.

3. *Acrostachys.* Flores parvuli (ad 4 lin.), hermaphroditi, 4-meri, in racemo terminali simplici numerosissimi, pedicellati. Bractea squamiformis; bracteolæ 0. Corolla tenuis, petalis intus infra medium plicis elevatis obliquis a filamento adnato utrinque divergentibus instructis. Antheræ longe lineares, filamento vix latiores, loculis arcte contiguis. Species 1 v. 2. Africæ orientalis, *L. Kirkii*, Oliv. in Journ. Linn. Soc. vii. 101, et in Hook. Ic. Pl. t. 1309, e Zambesi, et *L. Sandersoni*, Harv. (ined.?), e Natal, ei valde affinis, ex speciminibus nostris vix perfectis.

4. *Plicopetalus.* Flores mediocres (1-1½-poll.) hermaphroditi, incurvi, ad axillas umbellati v. laxe subcymosi. Petala basi dilatata ibidemque intus plicis elevatis obliquis a filamento adnato utrinque divergentibus instructa. Antheræ longe lineares, filamento vix latiores, loculis inter se vix distinctis. Species 1 v. 2, Africæ tropicæ orientalis incolæ, cum *L. undulato*, E. Mey., ex Africa australi.

5. *Heteranthus.* Flores mediocres (¾–1½-poll.), hermaphroditi, 4–6-meri, ad axillas v. nodos cymosi v. breviter racemosi, rarius solitarii. Bractea squamiformis; bracteolæ 0. Corolla recta v. incurva, apice in alabastro non clavata, petalis intus præter filamentum adnatum planis. Antheræ lineares v. subulatæ, filamento non v. vix latiores, loculis parum distinctis v. confluentibus interdum plus minus distincte 2-seriatim ∞-locellatis. Folia in speciebus nonnullis verticillata, in aliis ad normam opposita. Species ad 24, ex ins. Archipelagi Malayani et maris Pacifici, Australia et Nova Zelandia, cum una Africana. Hic includuntur: (*a*) floribus ad axillis solitariis, *L. tetrapetalus*, Forst., e Nova Zelandia: (*b*) floribus ad nodos sessilibus fasciculatis v. subcymosis, *Dendrophthoë verticillata*, Scheff. Ann. Jard. Buitenz. i. 37. et specimina Cumingiana n. 1952 (1958), 1966, et Beccariana n. 688; (*c*) cymis pedunculatis sæpius densis, *L. luzonensis*, Presl (Cuming. n. 1964), et specimina Cumingiana n. 1947, 1956, et 1957, ex ins. Philippinis: *L. sanguineus*, F. Muell., *L. bifurcatus*, Benth., *L. maytenifolius*, A. Gray, Bot. Amer. Expl. Exped. t. 99 (cymis subterminalibus), *L. linophyllus*, Presl, *L. pendulus*, Sieb., DC. Mem. Lor. t. 1 (*L. congener*, DC. l. c. t. 2, *L. longifolius*, Hook. Ic. Pl. t. 880), *L. Quandang*, Mitch., et *L. grandibracteatus*, F. Muell. (cyma dense pauciflora bractea magna foliacea stipata) ex Australia; (*d*) racemis densis breviter v. brevissime pedunculatis: *L. indicus*, Desv., e Timor, *L. insularum*, A. Gray, Bot. Amer. Expl. Exped. 738, t. 98, et *L. vitiensis*, Seem. Fl. Vit. 120, t. 23, ex ins. maris Pacifici, *L. Colensoi*, Hook. f., Hook Ic. Pl. t. 633, e Nova Zelandia, et *L. signatus*, F. Muell., ex Australia; (*e*) racemis axillaribus laxis floribus in pedicellis solitariis v. ternatis dissitis antheris insigniter biseriatim ∞-locellatis, ovario cylindraceo: *L. heteranthus*, Wall. (*L. eleutheropetalus*, Kurz, *L. macrocalyx*, Miq.) ex Archipelago Malayano, et *L. Mannii*, Oliv. in Journ. Linn. Soc. vii. 101, et in Hook. Ic. Pl. t. 1303, ex Africa tropica.

Antheræ in hac præsertim sectione ut in *Elytrantho* valvis loculorum subevanidis et superficie plus minus distincte ∞-locellatis iis *Visci* quodammodo accedunt.

** *Petala breviter v. alte in tubum integrum v. dorso fissum coalita. Flores mediocres v. longiusculi, hermaphroditi, 1-bracteati absque bracteolis.*

6. *Tapinostemma.* Flores 5-meri, ad axillas 3-ni, singuli bracteæ cyathiformi insidentes. Calycis limbus prominens. Corollæ tubus æqualis, basi intus squamellis 5 staminibus oppositis supra ovarium conniventibus instructus; lobi lineares, infra medium intus plicis elevatis obliquis a filamento adnato utrinque divergentibus instructi. Species 1 v. 2, Orientales v. Africanæ tropicæ orientales, corollæ reliquiis in fructu persistentibus insignes. *L. acaciæ*, Zucc. in Abhandl. Akad. Wiss. Münch. iii. 249, t. 2, cum specie ei valde affini.

7. *Cichlanthus*, Endl. Flores sæpius 4-meri, pedunculis ad axillas v. nodos solitariis v. fasciculatis brevibus paucifloris rarius distincte racemiferis. Bractea squamiformis. Calycis margo supra ovarium non v. vix prominulus. Corolla sæpius tenuis, tomentosa v. farinosa, recta v. incurva, intus nuda, tubo sæpe dorso fisso. Antheræ anguste lineares, loculis sæpius parum distinctis. Species ad 24, omnes Asiaticæ. Hic includuntur: *L. buddleoides*, Desv., *L. vestitus*, Wall. Pl. As. Rar. t. 230, *L. cinnamomeus*, Wall., DC. Mem. Lor. t. 6, *L. cordifolius*, Wall., *L. ferrugineus*, Roxb., Hook. Bot. Misc. i. t. 59 (Cuming, n. 2257 e Malacca), *L. lævigatus*, Wall., *L. obtectus*, Wall., *L. rhopalocarpus*, Kurz., *L. philippinensis*, Cham. (Cuming, n. 491, 1977), *L. atropurpureus*, *L. Schultesii*, *L. repandus*, *L. sphenoideus* (Cuming, n. 490, 1970), *L. chrysanthus*, *L. fasciculatus* (*ex ic.*), *L. fuscus* (Cuming, n. 1959 ?) et *L. lepidotus*, Blum. Fl. Jav. Lor. t. 1 ad 8, *L. igneus*, Scheff., *L. Jadoriki*, Sieb. (e Japonia), *L. Chinensis*, DC. Mem. Lor. t. 7. Species duæ, *L. leptanthus*, Wall., DC. Mem. Lor. t. 5, et *L. pulverulentus*, Wall., a cæteris parum differunt floribus distincte racemosis, cætera tamen omnino *Cichlanthi*. Hæc sectio cum tribus sequentibus facile pro unius subsectionibus haberes, quarum *Cichlanthus* imprimis calyce non producto et floribus sæpius 4-meris, *Tapinanthus* filamentis in dentem productis, *Tolypanthus* bracteis involucrantibus, a *Dendrophthois* typicis distinguuntur.

8. *Dendrophthoë.* Flores sæpius 5-meri, ad axillas v. nodos fasciculati cymosi v. breviter racemosi. Bracteæ concavæ, sæpius quam in *Cichlantho* majores. Calycis limbus prominulus, truncatus v. 5-dentatus. Corolla tomentosa v. sæpius glabra, recta v. incurva, intus nuda, tubo basin versus sæpe ampliato rarius ut in *Tapinantho* ima basi globoso. Antheræ anguste oblongæ v. lineares, in summo filamento erectæ cum eoque continuæ, loculis plus minus distinctis. Species ultra 60, per regiones tropicas orbis veteris late dispersæ. Hic includuntur: (*a*) florum fasciculis v. cymulis sessilibus v. subsessilibus, corollis tomentosis villosisve: *L. bracteatus*, Roxb., *L. tomentosus*, Hayne, Wight, Ic. t. 378, et *L. Candolleanus*, W. et Arn., Wight, Ic. t. 305, ex India orientali, *L. nigritanus*, Benth., *L. rufescens*, DC., *L. regularis*, Steud., *L. polycryptus*, Desv., et *L. usuiensis*, Oliv., ex Africa tropica, cum *L. hirsutiflora*, Kl., et *L. oblongifolia*, E. Mey., speciebus pariter Africanis florum ternationibus breviter pedunculatis: *L. ovalis*, E. Mey., et *L. glaucus*, Thunb. (Moquinia, *Spreng. f. Syst. Suppl.* 9) ex Africa australi bractea parva angusta et floribus 4-meris *Cichlantho* accedunt, sed calycis limbus prominens sinuato-dentatus *Dendrophthois*.—(*b*) florum fasciculis v. cymulis sessilibus v. subsessilibus, corollis glabris v. subglabris basi non ampliatis: *L. memecylifolius*, W. et Arn., Wight, Ic. t. 142, *L. elasticus*, Desv., Wight, Ic. t. 343, *L. nilgherrensis*, Wight, Ic. t. 1020, *L. euphorbiæ*, Wight, Ic. t. 1063, et *L. cuneatus*, Wall., ex India orientali, *L. dictyophlebus*, F. Muell., *L. alyxifolius*, F. Muell., *L. odontocalyx*, F. Muell., *L. linearifolius*, Mitch., *L. exocarpi*, Behr., et *L. acacioides*, A. Cunn. ex Australia, species 3 v. 4 e Nova Caledonia, *L. clavatus*, Desv., *L. filifolius*, Boj. (ined. ?), *L. Bojeri*, Bak., et *L. seychellensis*, Bak., ex ins. Mascarensibus, et *L. leptolobus*, Benth., cum speciebus 8 (novis?) ex Africa tropica.—(*c*) cymis pedunculatis, corollis glabris v. subglabris basi non ampliatis: *L. platyphyllus*, Hochst., cum speciebus 3 affinibus ex Africa tropica, *L. Zeyheri*, Harv., *L. Natalitia*, Meissn., et *L. oleæfolius*, Cham. et Schl. (Lichtensteinia, Wendl. Coll. ii. 4, t. 39), ex Africa australi.—(*d*) florum racemis ad axillas brevissimis v. longiusculis, corollis glabris v. subglabris a basi tenuibus rectis v. incurvis: *L. longiflorus*, Desv., Wight, Ic. t. 302 (cum pluribus affinibus v. varietatibus, *L. bicolor*, Roxb., *L. amplexifolius*, DC., Wight, Ic. t. 301, *L. elatus*, *L. imbricatus*, et *L. lineatus*, Edgew., etc.), *L. umbellifer*, Schult., *L. suborbicularis* et *L. ligulatus*, Thw., *L. elegans*, Wall., *L. prælongus*, *L. curvatus*, et *L. maculatus*, Blum. Lor. t. 12, 13, et specimina Cumingiana n. 1946, 1955, 1965, 1967, et 1973, et forte Beccariana n. 18, omnes ex India orientali v. Archipelagi Malayani, *L. longifloro* solo usque ad Australiam extenso.—(*e*) floribus ad axillas racemosis, corollis farinosis v. glabris rectiusculis basi v. usque ad medium plus minus ampliatis: *L. pentandrus*, Linn. Blum. Fl. Jav. Lor. t. 10, 11 (*L. rigidus*, Wall., *L. farinosus*, Desv., DC. Mem. Lor. t. 4), *L. stenopetalus*, Oliv., Hook.

Ic. t. 1223, et Cumingii n. 1953 et 1962, omnes ex Archipelago v. Peninsula Malayana.—(*f*) florum umbellis pedunculatis, corollis glabris supra basin subglobosam contractis cæterisque characteribus *Tapinanthi*, exceptis filamentis sub antheris obtusis v. cum connectivo continuis nec in dentem productis; *L. oreophilus*, Oliv. in Journ. Linn. Soc. vii. 196, cum speciebus 3 ei affinibus ex Africa tropica.

Dendrophthoë, *Mart. in Flora* 1830, 109, *Miq. Fl. Ind. Bat.* i. i. 810, sectiones includit *Cichlanthum* et *Dendrophthoem*, quas Blume pro subsectionibus indicavit, et Endlicher, Gen. 802, nominibus salutavit. Miquel tamen l. c. species nonnullas v. petalis liberis v. aliis characteribus alienas includit. Scurrula, *G. Don. Gen. Syst.* iii. 421, species plurimas *Cichlanthi* et *Dendrophthois* includit.

9. *Tapinanthus* (Blum.). Flores sæpius 5-meri, ad axillas v. nodos fasciculati v. cymosi, singuli bractea concava v. oblique cyathiformi stipati. Calycis limbus prominulus, sæpe cupulatus. Corolla glabra v. subglabra, supra basin globosam ovoideam v. rarius oblongam sæpissime contracta. Antheræ oblongæ v. oblongo-lineares, filamento ante antheram in dentem v. appendiculam parvam erectam producto, loculis distinctis. Species ad 24, omnes Africanæ: *L. pentagonia* et *L. dodonæifolius*, DC. Mem. Lor. t. 8, 9, *L. sessilifolius*, Beauv., et *L. Belvisii*, DC.; Beauv. Fl. Ow. et Ben. t. 63, 64, *L. globiferus*, A. Rich., *L. Schimperi*, Hochst., aliæque plures ex Africa tropica, *L. namaquensis*, Harv., *L. Kraussianus*, Meissn., *L. prunifolius*, E. Mey., et *L. quinquenervius*, Hochst., ex Africa australi. Filamenti appendix variat valde prominens v. minima et species nonnullæ inter *Dendrophthoem* et *Tapinanthum* fere ambiguæ.

10. *Tolypanthus* (Blum.). Flores sæpius 5-meri, per 4–6 sæpius 5 in capitulo sessili v. breviter pedunculato sessiles, bracteis totidem amplis foliaceis v. coloratis in involucrum basi v. alte coalitis. Corollæ antheræque fere *Dendrophthois*, sæpius tamen breviores. Species nobis notæ 4, Asiaticæ: *L. involucratus*, Roxb., cum specie nova Malaccensi bracteis vix basi connatis, *L. Gardneri*, Thw., bracteis coloratis basi breviter connatis, et *L. lageniflorus*, W. et Arn., Hook. Ic. Pl. t. 229, Wight, Ic. t. 306, bracteis in cupulam magnam coloratam margine breviter sinuato-lobatam coalitis.

11. *Loranthera*. Flores 5-meri, longi (4–5 poll.), cymis ad axillas sessilibus, bracteis parvis. Antheræ lineares, in filamento summo apice dilatato dorsifixæ. Species 2, Archipelagi Malayani incolæ. Loxanthera, *Blum. Fl. Jav. Lor. t.* 20, *et t.* 23 c. Specimina Beccariana, n. 1357, plantæ Blumeanæ adsocianda videntur sed specifice distincta.

*** *Petala breviter v. alte in tubum integrum v. dorso fissum coalita. Flores longi v. parvuli, hermaphroditi, singuli bractea bracteolisque 2 stipati.* (Sectiones 3 sequentes facile pro unius subsectionibus haberes).

12. *Macrosolen* (Blum.). Bracteæ ovario breviores. Species fere 30, Asiaticæ cum una Novo-Zelandica. Macrosolen, *Miq. Fl. Ind. Bat.* i. i. 827. Hic includuntur: *a. Longifloræ.* Pedunculi breves ad axillas fasciculati 1–3-flori. Corollæ 1–3-pollicares, basi tenues. Antheræ lineari-subulatæ, loculis parum distinctis. *L. formosus*, Blum. Lor. t. 15 (*Beccari*. n. 1643), *L. evenius*, Blume, Lor. t. 16 (Beccari, n. 2026), cum sp. nov. 3 (Lobb, Beccari, n. 310, 610) ex Archipelago Malayano.

b. Densifloræ. Pedunculi breves, sæpius fasciculati, racemoso-3-∞-flori. Corolla (sæpius ½–1, poll.) fere a basi gradatim ampliata. Antheræ breviter lineares. *L. retusus*, Jack., *L. Brandesianus*, Kurz, et sp. novæ? e Borneo Lobb, ins. Philippinis Cuming n. 1969 (petalis in hac nonnisi ad basin connatis), omnes ex Archipelago Malayano.

c. Racemulosæ. Flores racemulosi. Corolla (rarius ½ poll. excedens) fere a basi latiuscula v. ampullacea, sub limbo sæpe contracta. Antheræ oblongæ. *L. ampullaceus* et *L. globosus*, Roxb., *L. oleæfolius*, *L. viridiflorus*, *L. subglobosus*, *L. pallens*, et *L. trigonus*, Wall., et *L. carinatulus*, Wall., DC. Mem. Lor. t. 3, species Indicæ nonnullæ inter se nimis affines, *L. sphærocarpus*, *L. subumbellatus* et *L. tetragonus*, Blum. Lor. t. 17 ad 19, et specimina Cumingiana n. 1951, 1953, 1963 (ins. Philippinis) et 2343 (Malacca) et Beccariana n. 553, omnes ex Archipelagi Malayani. *L. flavidus*, Hook. f. Fl. N. Zel. i. 100, t. 27, e Nova Zelandia, etiam ad *Macrosolenem* referendus videtur etsi bracteæ minutæ vix conspicuæ v. obsoletæ.

13. *Elytranthe* (Blume). Bracteæ ovario longiores, imbricatæ, omnes flores foventes. Flores (1–1½ poll.) sæpius 6-meri, in capitulis sessilibus v. breviter pedunculatis 3–5-ni. Corolla sæpius basi attenuata, curvula. Antheræ lineari-subulatæ, loculis vix distinctis sæpe ∞-locellatis. Species nobis notæ 4, Asiaticæ: *L. albidus*, Blum. Lor. t. 22 et 23 d (*L. leucosiphon*, Griff. Ic. Pl. Asiat. t. 619), *L. lonicerоides*, Linn., Wight, Ic. t. 303, *L. capitellatus*, Wight, Ic. t. 304 (vix a *L. loniceroide* distinctus), et species ut videtur nova ex Assam et Khasia. Elytranthe, *Miq. Fl. Ind. Bat.* i. i. 832.

14. *Lepeostegeres* (Blume). Bracteæ ovario longiores, exteriores vacuæ, omnes imbricatæ, capitulum

strobiliformem sessilem v. breviter pedicellatum involucrantes. Cætera *Elytranthis.* Species nobis notæ 7, ex Peninsula v. Archipelago Malayano: *L. gemmiflorus*, Blum. Lor. 18, t. 21, et species 1 Philippinensis, Cuming n. 1971 et 1974, 1 Malaccensis, Maingay, et 4 Borneenses, Lowe, et Beccari n. 1171, 1248, et 2579. Inter has una flores in capitulo valde numerosos exhibet, involucrum 3-pollicarem pollicibus 2 excedentes. LEPIOSTEGERES, *Miq. Fl. Ind. Bat.* i. i. 833.

B. *Loranthi Americani cum paucis Australianis, antheris* (*excepto* Aëtantho) *versatilibus.*

15. *Aëtanthus* (*Psittacanthi* subgenus, Eichl.). Flores longi (2–4-pollicares v. in una specie subpedales), tenues, petalis alte in tubum connatis, ad apices ramorum corymboso-cymosi. Antheræ lineares, adnatæ, loculis ima basi breviter liberis patentibusque, uno altero demissiore. Semen (in *L. nodoso*) exalbuminosum, cotyledonibus 2 crasso-carnosis plano-convexis semiteretibus. Frutices parasitici. Species 4, Columbianæ v. Ecuadorenses. *Hook. Ic. Pl. t.* 743.

16. *Psittacanthus* (subgenus *Eupsittacanthus*, Eichl.). Flores longi v. longiusculi (1½–6-pollicares), singuli cupula e bractea bracteolisque conflatis stipati, petalis per anthesin usque ad basin solutis. Antheræ oblongæ v. lineares, in filamento filiformi versatiles. Semen ubi notum exalbuminosum, cotyledonibus crasso-carnosis. Frutices parasitici. Species ultra 40, per Americam tropicam late dispersæ, perpaucæ in America australi ultra tropicos extensæ (*P. divaricatus*, Eichl., a Cumingio prope Limam nec in Chile lectus fuit). In subsectiones 2 sequentes distribuuntur:—

a. Eupsittacanthus. Flores ad apices ramorum corymboso-cymosi. Cotyledones ubi notæ 4 (rarius ex Eichl. 5–6), dorso connexæ, intus costa prominente bifaciales. *Jacq. Stirp. Amer. t.* 67. *Lam. in Journ. Nat. Hist.* i. *t.* 23. *Ruiz et Pav. Fl. Per. et Chil. t.* 274*a*. *Vell. Fl. Flum. Ic.* iii. *t.* 147, 148. *DC. Mem. Lor. t.* 10. *Wawra, Pr. Max. Reise, Bot. t.* 58. *Eichl. in Mart. Fl. Bras.* v. ii. *t.* 2 *ad* 4, 6 *ad* 8.

b. Maschalanthus. Flores omnes axillares, solitarii terni v. cymosi. Cotyledones ubi notæ 2, dorso-convexæ, semiteretes, facie interiore plana appressæ. Huc pertinent *L. biternatus*, Hoffm., *L. dichrous*, Mart., Eichl. in Mart. Fl. Bras. v. ii. t. 5, *L. glaucocoma*, Eichl., et *L. cuneifolius*, Ruiz et Pav. Fl. Per. et Chil. t. 276. Hæc ultima species ab Eichlero in Mart. Fl. Bras. v. ii. 49, t. 11, semine ignoto, sub *Phrygilantho* collocatur, non obstante cupula sub floribus omnino *Psittacanthi*. Griseb. (Pl. Lorentz. 109) in semine immaturo embryonem vidit in centro albuminis (an potius pericarpii strato interiore pro albumine habito?), nos tamen in seminibus 2 pæne maturis examinatis albumen nullum invenimus, cotyledonibus omnino *L. biternati* et *L. dichroi*. Flores superiores fere semper in axillis solitarii, inferiores tamen sæpe 2–3-ni.

PSITTACANTHUS, *Mart. in Flora* 1830, 106, a variis auctoribus varie extenditur, ab Eichlero in Mart. Fl. Bras. v. ii. 23 ad sectiones duas præcedentes semine exalbuminoso accurate limitatur, nobis tamen vix pro genere proprio retinenda videtur. In speciebus nonnullis gerontogeis præsertim Africanis embryo crasso-carnosus est, et albumen, etsi copiosum, solito tenuius, in pluribusque speciebus pericarpio arcte adnatum, et forte in *Psittacantho* non omnino deest. Cæterum semina paucarum tantum specierum *Loranthi* adhuc examinata sunt.

17. *Phrygilanthus.* Flores mediocres v. longi (rarius infra ½ poll. in una specie 6-pollicares), hermaphroditi, bracteolis liberis v. 0, petalis ad basin solutis. Antheræ versatiles. Fructus ubi notus normalis, semine æquali, embryone subtereti in centro albuminis copiosi. Frutices parasitici. Species ad 20, pleræque austro-Americanæ, paucæ Australianæ in subsectiones 3 distribuendæ:—

a. Metastachys. Flores longiusculi v. longi, in una specie semipedales, in racemis terminalibus simplicibus secundi, singuli bractea obliqua stipati, bracteolis 0. Species 3, Columbianæ v. Peruvianæ. *Ruiz et Pav. Fl. Per. et Chil. t.* 273*a*, 275*b*.

b. Quintralia (Eichl. pro parte). Flores mediocres, in racemis terminalibus abbreviatis subumbelliformibus v. cymoso-ramosis non secundis, bractea sæpius persistente, bracteolis 0. Species 3, Americæ australis extratropicæ, imprimis Chilenses v. Andinæ. *Ruiz et Pav. Fl. Per. et Chil. t.* 275*a*. *Pœpp. et Endl. Nov. Gen. et Sp. t.* 184.

c. Euphrygilanthus. Flores mediocres, ternati, ternationibus in axillis superioribus racemosis more *Struthanthi*, a quo hæc subsectio differt floribus majoribus hermaphroditis. Bracteolæ sæpius parvæ, caducissimæ. Species Americæ australis ad 10, quarum 3 Chilenses ab Eichlero sub *Taguana* inclusæ ob florem centralem ternationis sessilem ut in *Gaiadendro*, sed parasiticæ sunt et bracteolæ minutæ v. caducæ; semina adhuc ignota. *Ruiz et Pav. Fl. Per. et Chil. t.* 273*b*. *Pœpp. et Endl. Nov. Gen. et Sp. t.* 183. Cæteræ species Andinæ v. Brasilianæ, flore centrali ternationum plus minus pedicellato, subsectionem *Tripodanthum*, Eichl., formant. *Ruiz et Pav. Fl. Per. et Chil. t.* 274*b*. *Hook. Ic. Pl. t.* 683.

Huic subsectioni etiam referendæ sunt species 3 Australianæ et una Novo-Zelandica (*L. tenuiflorus*, Hook f.), a cæteris Australianis diversæ antheris versatilibus. Inter *Euphrygilanthos* distinguuntur et quodammodo *Quintraliæ* approximantur inflorescentiis laxe paucifloris, floribus lateralibus ternationis longiuscule pedicellatis, centrali subsessili, v. interdum ternatione ad florem unicum reducta. *Benth. Fl. Austral.* iii. 388 (*species 3 priores*). *A. Gray, Bot. Amer. Expl. Exped. t.* 100. *F. Muell. Pl. Vict. t.* 30.

L. eugenioides, H. B. et K. Nov. Gen. et Sp. iii. 435, Eichl. in Mart. Fl. Bras. v. ii. t. 12, 13 (*L. odoriferus*, Vell. Fl. Flum. 138, Ic. iii. t. 146), ab auctoribus prius citatis arboreus dicitur, et idcirco a G. Don in genere suo *Gaiadendro* includitur. Species, qualem ut videtur rite intelligit Eichler, in Peruvia et Brasilia late diffusa est, et a collectoribus plerisque (Burchell, Tweedie, Pearce, Velloso) parasitica dicitur in variis arboribus, ex Gardnero aliisque nonnullis ab Eichlero citatis frutex est terrestris, super frutices alios scandens iisque demum adhærens. Grisebach. Pl. Lorentz 109, specimina parasitica ad *L. ligustrinam*, Willd., refert, nullo tamen alio charactere a terrestribus distinguenda sunt. Fructus in speciminibus solis Claussenianis vidimus, ubi certe normales sunt nec *Gaiadendri*.

L. lanceolatus, Ruiz et Pav. Fl. Per. et Chil. t. 278*b*, et *L. ellipticus*, Ruiz et Pav. l.c. t. 276*a*, frutices parasitici bracteis bracteolisque ut in *Gaiadendro* persistentibus, a nobis non visi, seminibus ignotis adhuc affinitatis dubiæ sunt, sed verisimiliter ad *Phrygilanthum* referendi juxta *L. eugenioidem*.

Genus Phrygilanthus, *Eichl. in Mart. Fl. Bras.* v. ii. 45, includit sectiones nostras *Phrygilanthum* et *Gaiadendrum*. Tristerix, *Mart. in Flora* 1830, 108, ad *L.* (*Quintraliam*) *tetrandrum*. Ruiz et Pav. cum speciebus 2 gerontogeis ei parum affinibus constitutum est. Notanthera, *G. Don, Gen. Syst.* iii. 428, includit species pleraque sectionis *Phrygilanthi* cum nonnullis sectionis *Struthanthi*.

18. *Gaiadendron*. Flores mediocres v. minores, hermaphroditi, bracteolis liberis, petalis ad basin solutis. Antheræ versatiles. Fructus endocarpium intus (more *Henslowiæ*) in laminas duras intra sulcos albuminis intrusas productus. Arbores v. frutices terrestres, erecti. Florum ternationes in racemos axillares dispositæ. Species 3 v. 4, quarum 2 v. 3 Andium Columbiæ et Peruviæ incolæ, inter se parum distinctæ, racemis in axillis superioribus floribundis floribus mediocribus. *Ruiz et Pav. Fl. Per. et Chil. t.* 277*a*. Gaiadendron, *G. Don, Gen. Syst.* iii. 431 (*excl. L. eugenioide*). Phrygilanthi *sect.* Taguana *pro parte*, *Eichl*; una Australiana, floribus minoribus, characteribus tamen inflorescentiæ floribus et seminibus iisdem. Atkinsonia, *F. Muell.*; *Benth. Fl. Austral.* iii. 388.

19. *Struthanthus*. Flores inter minores, rarius 4 lin. longi, nunc minuti, sæpissime abortu dioici, bracteis bracteolisque liberis v. basi coalitis sæpe parvis rarius 0, petalis ad basin solutis. Antheræ versatiles. Fructus ubi notus normalis, semine æquabili, embryone subtereti in centro albuminis copiosi. Frutices parasitici. Species ad 75, omnes Americanæ, in subsectiones 5 distribuendæ:—

a. Eustruthanthus. Flores ternati, ternationibus secus rhachin racemi axillaris pedicellatis v. sessilibus. Alabastra sæpius clavata; basin versus attenuata. Filamenta filiformia, rarius fere ad apicem adnata. Species ad 40, Americanæ tropicæ. *Eichl. in Mart. Fl. Bras.* v. ii. 67, *t.* 20 *ad* 26 *et* 28, *f.* 1 *ad* 7 (*Struthanthus*). *Vell. Fl. Flum. Ic.* iii. *t.* 145. *Miq. Stirp. Surin. t.* 61. *Wawra, Pr. Max. Reise, Bot. t.* 59. Huc etiam verisimiliter pertinet Spirostylis, *Presl, in Roem. et Schult. Syst.* vii. 163.

b. Cymularia. Pedunculi in axillis plures, breves, laxe cymulosi, floribus paucis omnibus pedicellatis. Species 2 Brasilienses. *Eichl. in Mart. Fl. Bras.* v. ii. 85, *t.* 27 *et t.* 28, *f.* 8, 9 (*Struthanthus*).

Genus Struthanthus, *Mart. in Flora* 1830, 102, includit subsectiones 2 præcedentes cum *Passovia* paucisque aliis speciebus; ab Eichlero ad subsectiones 2 præcedentes limitatur.

c. Dendropemon. Flores singuli secus rhachin racemuli axillaris dissiti nec ternati, sessiles v. pedicellati. Filamenta subsectionis *Passoviæ*. Species ad 10, omnes Indiæ occidentali propriæ. *Eichl. in Mart. Fl. Bras.* v. ii. 55 (*Phthirusæ sect.*). *Griseb. Fl. Brit. W. Ind.* 312; *Cat. Pl. Cub.* 119. *Jacq. Stirp. Amer. t.* 69. Dendropemon, *Blum. Fl. Jav. Loranth.* 13.

Lipotactes, *Blum. Fl. Jav. Loranth.* 13, est *Loranthus pauciflorus*, Sw., a cæteris *Dendropemonibus* distinctus antheris sessilibus. Specimina nostra omnia ♀. Eichler speciem in *Dendropemone* includit.

d. Passovia. Flores ternati, ternationibus secus rhachin racemi axillaribus pedicellatis v. sæpius sessilibus ut in *Eustruthantho*, sed alabastra magis æqualia et filamenta incrassata, alterna longiora latere utroque pressione antherarum breviorum excavata. Species ad 16, Americanæ tropicæ, a Martio in Flora 1830, 105, in *Struthantho* inclusæ, ab Eichlero in Mart. Fl. Bras. v. ii. 55 ad 64, t. 14 ad 17 et t. 19, ad *Phthirusam* translatæ. Passowia, *Karst. in Bot. Zeit.* 1852, 305.

e. Phthirusa. Flores minimi, crassiusculi, secus rhachin elongatam axillarem ternatim sessiles v. ternatione unica in axilla arcte sessiles. Filamenta petalis adnata, anthera sola libera versatili. Species ad 9, Americanæ tropicæ. *Eichl. in Mart. Fl. Bras.* v. ii. 65, *t.* 18, *et t.* 19, *f.* 8 *ad* 10 (*Phthi-*

rusa Euphthirusa iii.). PHTHIRUSA, *Mart. in Flora* 1830, 110, genus ab Eichlero ad *Passowiam* et *Dendropemonem* extensum.

20. *Oryctanthes.* Flores minimi, crassiusculi, secus rhachin crassiusculam spicæ singulatim sessiles, et sæpius plus minus immersæ. Filamenta brevissima, sub anthera attenuata. Species ad 5, Americanæ tropicæ imprimis Antillanæ centralis v. Andinæ. *Jacq. Stirp. Amer. t.* 68. *Pœpp. et Endl. Nov. Gen. et Sp. t.* 185. ORYCTANTHES, *Eichl. in Mart. Fl. Bras.* v. ii. 87, *t.* 29, 30.

TRIBUS II. VISCEÆ.

3. **Viscum,** *Linn. Gen. n.* 1105.—Flores dioici v. monoici. Perianthii tubus in fl. ♂ brevissimus solidus, in fl. ♀ ovario adnatus; limbus 3–4-partitus. Antheræ in fl. ♂ ovatæ v. oblongæ, explanatæ, lobis perianthii undique v. rarius medio dorso tantum adnatæ, loculis non distinctis sed facie interiore multiporosæ. Ovarium in fl. ♀ inferum, ad normam ordinis; stigma crassum, pulvinatum, in vertice ovarii sessile v. stylo brevi fultum. Bacca perianthii lobis coronata v. nuda, mesocarpio succulento viscifluo. Embryo albumine copioso carnoso inclusus v. interdum embryones 2, teretes.—Frutices in arbores parasitici, ramis oppositis v. dichotomis. Folia opposita, nunc plana crassiuscula, nunc ad squamas v. dentes minutos reducta. Flores ad axillas v. nodos v. ad apices ramorum 3–5-natim fasciculati v. rarius solitarii, fasciculis sessilibus v. rarius breviter pedunculatis. Bractea sæpius parva, bracteolis 2 liberis v. in unam coalitis v. rarius deficientibus.

Species fere 30, per regiones calidiores et temperatas orbis veteris late dispersæ, nonnullæ imprimis *V. album* et *V. orientale* super aream latissimam distributæ, a botanicis sub nominibus diversis repetitæ. *DC. Prod.* iv. 278, § 1 *et* 3. *Walp. Rep.* ii. 437; *Ann.* i. 361, ii. 727, v. 91 (*excl. sp. Americanis*). *Dcne. in Mem. Acad. Brux.* xiii. *cum t.* 3. *Griff. in. Trans. Linn. Soc.* xviii. *t.* 10, 11 *et* xix. *t.* 21.

Genus a Korthalsio, Mem. Lor. 58, in Verh. Batav. Genootsch. xvii., in sectiones 3 sequentes dividitur:—

1. *Viscum verum*, ramis foliatis dichotomis v. inferioribus stellato-subverticillatis, florum fasciculis terminalibus v. in dichotomiis ramorum. Huc pertinet *V. album*, Linn., Hayne, Arzneigew. iv. t. 24, cui referenda videntur et vix pro varietatibus distinguenda *V. stellatum*, Ham., et *V. laxum*, Boiss. et Reut.

2. *Ploionuxia*, ramis foliatis oppositis, florum fasciculis axillaribus. Species 14 v. 15, Asiaticæ, Australianæ et Africanæ, cum una Novo-Zelandica. *Blum. Fl. Jav. Lor. t.* 24, 25 A. *Griff. Ic. Pl. As. t.* 631. *Wight, Ic. t.* 1016. *Linds. Contr. N. Zeal. Bot. t.* 2.

3. *Aspiduxia*, ramis aphyllis articulatis v. rarius continuis, florum fasciculis ad nodos v. articulationes oppositis. Species ad 15, Asiaticæ, Australianæ et Africanæ, cum una Novo-Zelandica, altera ex ins. maris Pacifici. *Blum. Fl. Jav. Lor. t.* 25 B, 26. *Griff. Ic. Pl. As. t.* 630, 632. *Wight, Ic. t.* 1017 *ad* 1019.

4. **Arceuthobium,** *Bieb. Fl. Taur. Cauc. Suppl.* 629. (Razoumowskia, *Hoffm. ex Bieb. l. c.*)—Flores dioici, in axillis solitarii. Perianthii tubus in fl. ♂ vix ullus, in fl. ♀ ovario adnatus; limbus in fl. ♂ 2–5-partitus, in fl. ♀ minimus, 2-partitus. Antheræ fl. ♂ in medio segmentorum sessiles, transversæ, loculis confluentibus rima unica dehiscentibus, demum apertæ fere orbiculares. Discus utriusque sexus carnosus. Ovarium fl. ♀ ovoideum, ad normam ordinis (v. ex Baillon ovulo distincto v. basi erecto); stylus brevis, crassus, subconicus, stigmate obtuso. Bacca ovoidea, breviter stipitata, perianthii lobis minutis coronata, basi lata ad apicem dilatatam stipitis adnata, pericarpio carnoso viscifluo, endocarpio sæpe distincto, maturitate basi circumscissa et elastice dehiscens, semen longe ejiciens. Semen ovoideo-oblongum; embryo albumine carnoso copioso inclusus.—Fruticuli in arboribus imprimis Coniferis parasitici, subaphylli, foliis nempe omnibus ad squamas parvas oppositas in vaginam apertam coalitas reductis. Flores in vagina utrinque solitarii, parvi, sessiles v. subsessiles, ebracteolati.

Species 5 v. 6, quarum una per Europam australem Asiam occidentalem et Americam boreali-occidentalem late dispersa, cæteræ Americæ borealis imprimis occidentalis v. Mexici incolæ. *Eichl.*

in Mart. Fl. Bras. v. ii. 105, *t.* 31. *Engelm. Cat. Pl. Wheel.* 252. *Hook. Fl. Bor. Amer. t.* 99. *Oliv. in Hook. Ic. Pl. t.* 1037. *Baill. in Assoc. Franc. Clerm.* 1876, 495. *t.* 6. De fructus dehiscentia confer *Rein. in Ann. Sc. Nat. ser.* 3, vi. 130.

5. **Dendrophthora,** *Eichl. in Mart. Fl. Bras.* v. ii. 102, *t.* 31. (Arceuthobium, *Griseb. Fl. Brit. W. Ind.* 314, *et Cat. Pl. Cub.* 121, *non Bieb.*)—Flores dioici v. rarius monoici, in rhachi spicæ sessiles v. sæpius immersi. Perianthii tubus in fl. ♂ brevis solidus, in fl. ♀ ovario adnatus; limbus in utroque 3-partitus v. rarius 4- v. 2-partitus; antheræ fl. ♂ in medio segmento sessiles, transversæ, loculis confluentibus rima unica dehiscentibus, demum apertæ fere orbiculatæ. Discus utriusque sexus carnosus. Ovarium fl. ♀ ovoideum, inferum, ad normam ordinis; stylus brevis v. brevissimus, crassus, subconicus, stigmate obtuso. Bacca ovoidea v. globosa, perianthii segmentis minutis coronata, pericarpio viscifluo, endocarpio sæpe distincto. Semen ovoideo-oblongum; embryo parvus, albumine copioso carnoso inclusus, v. radicula brevissime exserta.—Fruticuli in arboribus parasitici, ramis teretibus angulatis v. compressis sæpius articulatis. Folia ad articulationes opposita, sæpissime ad squamas minutas distinctas reducta, in paucis speciebus evoluta, plana. Spicæ terminales v. axillares, sæpius ∞-articulatæ, ad articulationes 2-bracteatæ. Flores inter articulationes ad utrumque latus spicæ solitarii v. plures, simplici serie superpositi, v. rarius utrinque gemini collaterales v. pauci 2–3-seriatim superpositi.

Species ad 25, pro maxima parte Indiæ occidentalis incolæ, una in America centrali, altera in Columbia vigente, quarum 19 ab Eichlero l.c. enumeratæ. *Jacq. Collect.* ii. *t.* 5, *f.* 3 (*Viscum*). His addendæ videntur species 3 Cubenses Wrightianæ in Sauv. Fl. Cub. 141 (*D. gracilis*, Wr., a *D. gracili*, Eichl., diversa videtur) et *Viscum squamigerum*, Benth. Pl. Hartw. 190, e Popayan, inflorescentia normali *Dendrophthoræ*, sed floribus ♂ adhuc ignotis, et verisimiliter, quod suspicatur Eichler, *Phoradendron sessilifolium* et *P. tetrastrachyum*, Griseb., quibus flores ♀ ut in *D. epiviseo*, Eichl., in quoque articulo gemini collaterales, floribus ♂ in omnibus adhuc ignotis. Genus inflorescentia et fructu *Phoradendro*, antheris *Arceuthobio* accedit.

6. **Phoradendron,** *Nutt. in Journ. Acad. Philad. ser.* 2, i. 185. (Allobium, *Miers in Ann. Nat. Hist. ser.* 2, viii. 179, *char. falso.* Spiciviscum, *Engelm. MS.*; *Karst. Fl. Columb.* i. 73, *t.* 36.)—Flores dioici v. rarius monoici, in rhachi spicæ sessiles v. leviter immersi. Perianthii tubus in fl. ♂ brevis, solidus, in fl. ♀ ovario adnatus; limbus in utroque 3-partitus v. rarissime 4- v. 2-partitus. Stamina fl. ♂ ad basin segmentorum affixa, erecta, filamentis brevissimis v. vix ullis; antheræ latiusculæ, vertice 2-loculares, loculis longitudinaliter dehiscentibus. Discus utriusque sexus carnosus. Ovarium fl. ♀ inferum, ad normam ordinis; stylus brevissimus, crassus, subconicus, stigmate obtuso v. subcapitato. Bacca sessilis, globosa v. rarius ovoidea, perianthii segmentis minutis sæpius coronata, pericarpio viscifluo sæpius succulento, endocarpio sæpe distincto. Semen ovoideum v. oblongum; embryo parvus, albumine copioso carnoso inclusus, v. radicula breviter exserta.—Frutices in arboribus parasitici, ramis teretibus angulatis v. rarius compressis, sæpius articulatis. Folia opposita, plana, crassa, v. rarissime ad squamas parvas distinctas reducta. Spicæ terminales v. axillares, solitariæ v. 2-∞-fasciculatæ, sæpius ∞-articulatæ, ad articulationes minute 2-bracteatæ. Flores inter articulationes ad utrumque latus rhacheos 2-∞-seriatim superpositi, v. rarius in articulo abbreviato pauci conferti.

Species ad 80, per Americam calidiorem latissime dispersæ, etiam extra tropicos tam in America boreali imprimis occidentali quam in Americæ australis republica Argentina extensæ. *Eichl. in Mart. Fl. Bras.* v. ii. 106, *t.* 32 *ad* 43. *Seem. Bot. Her. t.* 62, 63 (*Viscum*). *Hook. Ic. Pl. t.* 368.

Castrea, *A. de St. Hil. Morphol.* 451, est verisimiliter *Phoradendri* cujusdam specimen fœmineum imperfecte observatum. In herbario auctoris nunc deesse dicitur.

P. juniperinum, Engelm., ramificatione et foliis ad squamas reductis, primo aspectu *Arceuthobium* simulat, spicæ etiam brevissimæ 3-4-floræ, sed antheræ 2-loculares ad basin perianthii et bacca globosa sessilis *Phoradendri*. Spicæ ad flores paucas reductæ in speciebus aliis perpaucis *Phoradendri*.

7. **Notothixos,** *Oliv. in Journ. Linn. Soc.* vii. 103.—Flores monoici in capitulis uni-

sexualibus. Perianthii tubus in fl. ♂ brevissimus solidus, in fl. ♀ ovario adnatus, ovoideus v. oblongus; limbus 3–5-partitus. Stamina in fl. ♂ basi loborum affixa, filamentis subnullis; antheræ subsessiles, latæ, erectæ, apice linea transversa dehiscentes, obscure ∞-locellatæ. Ovarium in fl. ♀ inferum, ad normam ordinis, disco carnosulo coronatum; stigma subsessile, pulvinatum v. capitatum. Bacca ovoidea, perianthii lobis persistentibus coronata, pericarpio parce viscifluo. Semen ovoideum; embryo albumine carnoso inclusus.—Frutices parasitici, tomento nunc tenuissimo incano demum obliterato, nunc aureo subflocco̧so densius vestiti, dichotome ramosi. Folia opposita, plana, coriacea; squamarum par infimum ad basin gemmarum axillarium interdum dentiformes, stipulas simulantes. Flores minimi, per 3–7 capitati, ad margines receptaculi compresso-conici uniseriatim sessiles, capitulis nunc in pedunculo 1–3, nunc ∞ secus rhachin spicæ v. racemi opposite sessilibus v. pedicellatis, pedunculo communi in dichotomiis ramorum solitario. Capitula ♂ in speciminibus rara apicem versus racemi v. spicæ; capitula inferiora omnia ♀ videntur.

Species 4, quarum una Zeylanica, *Thw. Enum. Pl. Zeyl.* 418 (*Viscum*), 3 Australianæ, *Benth. Fl. Austral.* iii. 397. *Hook. Ic. Pl. t.* 73 (*Viscum*).

Genus certe *Ginalloæ* valde affine, et character in floribus ♂ minutis raris haud facile observatur, sed indumento et inflorescentia statim dignoscendum.

8. **Ginalloa,** *Korth. Loranth.* 64, *in Verh. Batav. Genootsch.* xvii.—Flores monoici in verticillastris unisexualibus. Perianthii tubus in fl. ♂ brevissimus solidus, in fl. ♀ ovario adnatus, ovoideus; limbus 3- rarius 4-partitus. Stamina fl. ♂ basi loborum affixa, filamentis brevissimis latis erectis; antheræ parvæ, loculis distinctis subparallelis v. divergentibus lateraliter dehiscentibus. Discus parvus. Ovarium fl. ♀ inferum, ad normam ordinis; stylus brevis, stigmate capitato. Bacca ovoidea, perianthii lobis minutis coronata, pericarpio viscifluo. Semen ovoideum; embryo albumine carnoso inclusus.—Frutices in arboribus parasitici, glabri, ramis oppositis v. dichotomis. Folia opposita, plana, coriacea, sæpe angusta. Flores minuti, in spicis axillaribus v. terminalibus subsessiles, pseudoverticillati, verticillastris secus rhachin dissitis, bracteis oppositis squamiformibus in unam aperte vaginatam coalitis, floribus in verticillastro ♀ 2–6, in ♂ 6–10, ebracteolatis.

Species 4, Asiaticæ, *Oliv. in Journ. Linn. Soc.* vii. 103. Huc pertinent præter *G. Arnottianam*, Korth., *Viscum spathulifolium*, Thw., e Zeylania, *V. Helferi*, Presl, e Birma, et *V. Cumingianum*, Presl, ex ins. Philippinis, Walp. Ann. ii. 729.

9. **Eremolepis,** *Griseb. Pfl. Phil. und Lechl.* 36.—Flores in spiculis unisexualibus monoici v. dioici. Perianthii tubus in fl. ♂ brevissimus, in fl. ♀ ovario adnatus, limbus 3–4- (rarius 5- ?) partitus. Stamina in fl. ♂ basi segmentorum affixa, filamentis brevissimis; antheræ ovatæ, erectæ, loculis parallelis longitudinaliter dehiscentibus. Ovarium in fl. ♀ inferum, ad normam ordinis, disco epigyno haud crasso; stylus brevis v. brevissimus, stigmate obtuso v. capitato. Bacca ovoidea, pericarpio viscifluo, endocarpio parum distincto. Embryo in albumine carnoso copioso subteres.—Frutices in arboribus parasitici, ramosi. Folia alterna, plana, crassiuscula. Spiculæ minimæ, ad axillas sessiles, globosæ v. oblongæ, juniores utriusque sexus bracteis squamiformibus imbricatis obtectæ, sub anthesi tamen bracteæ sæpe desunt.

Species 5, Americæ tropicæ v. australis extratropicæ incolæ. *Walp. Ann.* v. 90. In *E. punctulata*, specie typica Chilense, quæ *Lepidoceras punctulata*, Clos in C. Gay Fl. Chil. iii. 165, t. 32, f. 1 (*Eremolepis verrucosa*, Griseb. l. c.) flores dioici sunt 3-4-meri, bacca apice nuda. *E. angustifolia* (quam Grisebach l. c. incaute pro plantam Closianam habuit et nomine *E. punctulatæ* signavit) floribus masculis solis nota est; hi 5-meri sunt floribus singulis intra bracteam bracteolis 2 late cymbiformibus carinatis stipatis.

Ixidium, *Eichl. in Mart. Fl. Bras.* v. ii. 130, *t.* 31, species 3 includit, una Cubensis, *E. Wrightii*, Griseb. Cat. Pl. Cub. 121, altera Brasiliana *I. Schottii*, Eichl. l. c., cujus specimina certa non vidimus, nuper tamen specimina a Glaziovio accepimus cum descriptione convenientia nisi floribus dioicis, ♂ sub n. 8242, ♀ sub n. 7665, tertia Peruviana, *Matthews*, adhuc inedita, floribus in spiculis distinctis

monoicis, fructu ut in specie Brasiliana perianthii lobis persistentibus coronata, cætera tamen cum habitu omnino *Eremolepidis* et genus Eichlerianum nobis melius pro sectione habendum videtur. Perianthii lobi in fructu persistentia v. decidua observantur etiam in diversis speciebus *Visci*.

10. **Subrachlea**, *Hook. f. Fl. Ant.* ii. 291.—Flores unisexuales in spiculis androgynis. Perianthii tubus in fl. ♂ turbinatus, solidus, in fl. ♀ ovario adnatus, ovoideus; limbus 3-partitus. Stamina basi loborum affixa, filamentis brevissimis; antheræ breves, erectæ, loculis discretis parallelis rima laterali dehiscentibus. Discus carnosus. Ovarium in fl. ♀ inferum, ad normam ordinis, cavo interiore in speciminibus examinatis solito evidentiore; stylus brevissimus, crassus, stigmate obtuso. Bacca obovoideo-globosa, perianthii lobis persistentibus coronata, mesocarpio viscifluo parco, endocarpio subcrustaceo. Semen globosum, maturum non vidimus; embryo (ex Eichl.) subteres, radicula longe exserta, cotyledonibus albumine inclusis semiteretibus.—Frutices in arboribus parasitici, præter squamas aphylli; rami teretes, novelli in parte inferiore squamis alternis appressis peltatim affixis instructi, superne esquamati, spiculas alternas sessiles v. foveolis leviter immersas ferentes. Spiculæ cylindraceæ (¼-½ poll. longæ), squamellis latis concavis rigidis imbricatis obtectæ, quarum infimæ vacuæ, intermediæ flores ♂, superiores flores ♀ foventes. Flores omnes minimi, intra bracteas solitarii, sessiles, ebracteolati.

Species 2, altera Uruguayensis, altera Brasiliana. *Eichl. in Mart. Fl. Bras.* v. ii. 133, *t.* 44.

11. **Tupeia**, *Cham. et Schl. in Linnæa* iii. 203.—Flores dioici, racemulosi. Perianthii tubus in fl. ♂ minimus, in fl. ♀ ovario adnatus; limbus 4- rarius 5-partitus. Stamina in fl. ♂ basi segmentorum affixa, filamentis filiformibus elongatis; antheræ ovato-oblongæ, loculis distinctis parallelis rimis lateralibus dehiscentibus. Discus 0. Ovarium in fl. ♀ inferum, ad normam ordinis; stylus columnaris, stigmate capitato. Bacca subglobosa, apice perianthii lobis caducissimis nuda; pericarpium succulentum viscifluum, endocarpio parum distincto. Semen subglobosum; embryo subteres, albumine copioso carnoso inclusus, cotyledonibus radicula longioribus.—Frutex in arboribus parasiticus, glaber v. minute puberulus. Folia opposita v. subopposita, plana, lata v. angusta. Florum racemuli laxi, axillares v. ramulos breves axillares terminantes, interdum ante folia nascentes, primo juventute e gemma imbricato-squamata oriundi, squamis tamen bracteisque caducissimis, simpliciter floribundi v. abbreviati 3–5-flori. Flores ♂ quam in generibus affinibus paullo majores, staminibus conspicuis non tamen perianthium excedentibus.

Species 1, Novo-Zelandica. *Hook. f. Fl. Nov. Zel.* i. 101, *t.* 26; *Handb. N. Zeal. Fl.* 108.

12. **Lepidoceras**, *Hook. f. Fl. Antarct.* ii. 293. (Myrtobium, *Miq. in Linnæa*, xxv. 652.)—Flores dioici, racemulosi. Perianthii tubus in fl. ♂ subnullus, in fl. ♀ ovario adnatus, limbus 4-partitus. Stamina in fl. ♂ basi segmentorum affixa, filamentis filiformibus longiusculis; antheræ parvæ, ovatæ, loculis parallelis longitudinaliter dehiscentibus. Discus carnosulus. Ovarium in fl. ♀ inferum, ad normam ordinis; stylus brevis, stigmate obtuso subcapitato. Bacca ovoidea v. globosa, perianthii limbo deciduo denudata, pericarpio viscifluo. Seminis albumen nullum a pericarpio distinguendum; embryo ovoideo-globosus, cotyledonibus crasso-carnosis, radicula brevi supera.—Fruticuli in arboribus parasitici, ramosissimi. Folia opposita, parvula, plana, coriacea, mucrone v. squamula apicali sæpius instructa. Florum racemuli axillares, ante anthesin squamis imbricatis obtecti strobiliformes, per anthesin racemi ♂ graciles, folio longiores, bracteis delapsis denudati, floribus oppositis pedicellatis, rhachi filiformi demum caduca; racemi ♀ in ramum foliatum excrescentes; squamæ infimæ deciduæ, superiores seu bracteæ flores singulos foventes, demum in folium apice tantum squamiforme excrescentes, fructus excedentes, ita ut baccæ ad axillas inferiores ramuli foliati appareant.

Species 3, Peruviæ et Chile incolæ. *Walp. Ann.* i. 362, 982. *C. Gay, Fl. Chil. t.* 32, *f.* 2.

13. **Antidaphne**, *Pœpp. et Endl. Nov. Gen. et Sp.* ii. 70, *t.* 199.—Flores monoici v. dioici, in spiculis unisexualibus. Perianthium in fl. ♂ 0, in fl. ♀ ovario adnatum, margine

minute remoteque 3–4-dentatum. Stamina in fl. ♂ 3–5, circa discum parvum carnosulum affixa, filamentis elongatis valde inæqualibus; antheræ ovatæ v. oblongæ, erectæ, loculis parallelis longitudinaliter dehiscentibus. Ovarium in fl. ♀ inferum, ad normam ordinis. Discus pulvinatus supra marginem perianthii prominens, in stylum brevissimum contractus, stigmate late capitato. Bacca ovoidea, pericarpio carnoso viscifluo. Semen albuminosum, embryonem perfectum non vidimus.—Fruticuli in arboribus parasitici. Folia alterna, plana, crassiuscula. Spiculæ ad axillas sessiles, ♂ subglobosæ v. ovoideæ, strobiliformes, bracteis squamiformibus latis imbricatis flores pedicellatos 1–3 foventibus per anthesin caducis; spiculæ ♀ novellæ basi squamis paucis imbricatis stipatæ, parte florida elonganda, per anthesin ebracteata, dentibus alternis flores 3–5 sessiles foventibus notata, rhachi demum apice in ramulum foliatum excrescente, fructibus in ramulo annotino infra folia sæpe persistentibus.

Species 2, Columbiæ et Peruviæ incolæ. *Walp. Rep.* v. 935.

In floribus ♂ filamenta ad apicem pedicelli semper inæqualia, uno centrali longiore crassioreque disco quasi imposito, 1 v. sæpius 2 ad utrumque latus brevioribus ad latera disci affixis. An revera flores 3, centrali 1 andro lateralibus 1–2-andris? Setulæ interdum minutissimæ perpaucæ sub staminibus apparent, an perianthii an bracteolarum rudimenta? haud patet.

Ordo CXLIX. SANTALACEÆ.

Endl. Gen. 324. Lindl. Veg. Kingd. 787.

Flores hermaphroditi v. abortu dioici rarius monoici, regulares. *Perianthium* simplex, virens v. corollinum, interdum carnosulum, basi ovario v. disco adnatum, apice v. sæpius usque ad discum divisum, lobis 4, 5 v. rarius 3 v. 6 valvatis v. rarius leviter imbricatis, intus prope basin pone antheras sæpissime fasciculo pilorum instructis, apice concavis inflexis v. planis. *Stamina* (*Grubbia* excepta) tot quot perianthii lobi iisque prope basin affixa, rarius altius adnata, v. sub lobis intra tubum affixa, lobis breviora v. rarius subæquilonga; filamenta filiformia v. latiuscula nunc brevissima. *Antheræ* basifixæ v. prope basin dorsifixæ, nunc erectæ ovatæ oblongæ v. oblongo-lineares, loculis 2 distinctis parallelis rimis longitudinalibus introrsum v. demum lateraliter dehiscentibus, nunc terminales loculis adnatis divergentibus distinctis v. confluentibus 4- v. 2-valves v. demum explanatæ. *Discus* epigynus v. perigynus, nunc annularis pulviniformis v. planus margine parum distincto v. obscuro v. vix ullus, nunc planus concavus v. subcampanulatus perianthii tubi partem liberam vestiens, margine plus minus prominulo integro sinuato v. inter stamina in angulos v. lobos squamiformes producto. *Ovarium* ab initio v. saltem anthesi peracta inferum, v. in *Anthoboleis* basi disco immersum, 1-loculare. *Stylus* cylindraceus, conicus v. abbreviatus, stigmate terminali capitellato truncato v. brevissime 2–3-lobo, interdum in vertice ovarii subsessili. *Ovula* 2–3 ab apice v. sub apice placentæ centralis filiformis v. crassiusculæ pendula, v. in *Anthoboleis* ovulum unicum erectum centrale (an forte a placenta erecta arcte adnata pendulum ?). *Fructus* indehiscens, nuceus v. sæpius drupaceus; exocarpium (in fructu infero e pericarpii stratu exteriore cum perianthii tubo conflatum) nunc tenue, siccum, nunc carnosum v. succulentum, interdum crassum; endocarpium crustaceum induratum v. osseum. *Semen* globosum v. ovoideum, extus læve rugosum v. profunde ∞-sulcatum; testa 0 (v. tenuissima nec facile solvenda ?). *Albumen* copiosum, carnosum, sæpius album. *Embryo* inclusus, sæpe tamen obliquus nec stricte centralis, linearis v. abbreviatus, sæpissime teres, rectus v. vix incurvus; cotyledones semiteretes v. rarius leviter dilatatæ, radicula supera longiores v. breviores, interdum minutæ v. vix distinguendæ.

Arbores frutices v. herbæ humiles sæpissime glabræ, paucæ in arboribus v. in radicibus

parasiticæ. Folia alterna v. opposita, integerrima, venatione præter costam sæpius parum conspicua, interdum ad squamas parvas reducta v. plane nulla. Stipulæ 0. Inflorescentia simplex centripeta v. si composita ultima cymulosa, pedunculi nempe ad axillas foliorum v. bractearum solitarii sæpius breves, interdum brevissimi v. sub flore sessili subnulli, 1-flori v. cymulam v. fasciculum 3-∞-florum ferentes, nunc omnes ad axillas foliorum v. squamularum dissiti, nunc in spicam v. racemum simplicem terminalem v. axillarem dispositi. Bractea (interdum foliacea) sub pedunculo ei haud raro plus minus adnata et in pedunculo ipso sita videtur; bracteolæ in pedunculo sub flore solitario v. sub cymula sæpissime 2 oppositæ, liberæ v. cum bractea in cupulam connatæ, v. rarius una v. utraque deficiens. Flores virides flavo-virentes v. rarius aurantiaci, in paucis speciebus conspicui, in plerisque parvi, interdum minuti.

Species vix 220, per regiones tropicas temperatasque utriusque orbis latissime dispersæ. Genera plurima hic recepta, præsertim e tribu *Osyridearum*, oligotypica, sæpe inter se characteribus parvæ valoris separata, a botanicis tamen libenter admissa, sæpeque patria bene limitata.

Ordo *Loranthaceis* valde affinis iisque a Baillono jungitur, sed bene distinctus videtur, imprimis ovarii structura. Etiam *Olacineis* pluribus notis accedit, sed perianthium constanter simplex. Tribus *Anthobolearum*, fere medium tenet inter *Osyrideas* et *Opilieas Olacinearum*, et e sententia botanicorum nonnullorum his adsociandus.

FORMÆ ABNORMES.

Frutices suffruticesve in arboribus parasitici in *Henslowia* et *Myzodendro*. Herbæ in radicibus parasiticæ in *Thesii* speciebus nonnullis et forte in aliis paucis.

Perianthii lobi leviter imbricati v. unus exterior in *Buckleya* et *Scleropyro*, ima basi abrupte contracti quasi stipitati in *Nanodea*. Perianthium 0 v. in fl. ♀ margine integrum in *Myzodendro*.

Stamina numero loborum perianthii duplo plura in *Grubbia*.

Ovarium junius intra perianthii tubum liberum, mox immersum in *Cervantesia* et *Santalo*.

Endocarpii plicæ seu processus interiores in sulcos seminis intrusæ in *Henslowia*.

CONSPECTUS GENERUM.

Tribus I. Thesieæ. Perianthii tubus basi ovario adnatus, supra ovarium infra lobos plus minus productus, disco tamen nullo prominente vestitus. Fructus parvus, nuceus, exocarpio tenui v. vix carnosulo (excepto *Osyridicarpo*).

1. Quinchamalium. Flores in spicam terminalem conferti, singuli basi urceola membranacea e bractea bracteolisque conflata stipati. Antheræ oblongo-lineares. Placenta brevis, recta, crassiuscula. Herbæ humiles, foliis linearibus.—*Amer. austr. extratrop.*

2. Arjona. Flores in spicam terminalem conferti, singuli basi bractea bracteolisque liberis stipati. Antheræ oblongo-lineares. Placenta brevis, recta, crassiuscula. Herbæ humiles, foliis linearibus v. sublanceolatis rigidulis.—*Amer. austr. extratrop.*

3. Thesium. Flores in spicam terminalem v. racemum laxum dispositi v. pedunculi axillares 1-flori v. cymuliferi. Bractea sæpe foliis subsimilis, bracteolæ liberæ v. 0. Antheræ parvæ, ovatæ v. oblongæ. Placenta filiformis, flexuosa v. contortuplicata. Herbæ suffruticesve, foliis linearibus v. parvis squamiformibus.—*Orbis vet. reg. temp. et trop., Brasilia.*

4. Thesidium. Flores dioici, minimi. Folia parva, squamiformia. Cætera *Thesii*.—*Afr. austr.*

5? Osyridicarpos. Habitus folia et fructus fere *Osyridis*, sed flores hermaphroditi, perianthii tubo supra ovarium cylindraceo carnosulo, summo apice cum lobis petaloideo. Suffrutices foliis planis, floribus ad axillas 1–3-nis.—*Afr. austr., Abyssinia.*

Tribus II. Osyrideæ. Perianthii tubus ovario adnatus, ultra ovarium haud productus, v. intus disco vestitus, lobis usque ad discum v. ovarium solutis v. rarius deficientibus. Fructus plus minus drupaceus, exocarpio carnoso v. succulento, rarius minor subsiccus.

* *Antherarum loculi distincti, paralleli, longitudinaliter dehiscentes.*

† *Discus margine inter stamina in lobos squamiformes productus.*

a. *Perianthii tubus adnatus, carnosus, post anthesin facile in segmenta solvendus.*

6. Cervantesia. Florum fasciculi ad axillas spicati v. in paniculam terminalem dispositi. Arbor foliis integerrimis subtus inflorescentiaque ferrugineo-tomentosis.—*Columbia, Peruvia.*

7. Iodina. Florum fasciculi ad axillas sessiles. Frutex foliis angulato-rhombeis, angulis spinescentibus glaberrimis.—*Amer. austr. extratrop.*

b. *Perianthii tubus arcte adnatus, æqualis.*

8. Pyrularia. Flores subdioici. Cymulæ ♂ ad apices ramorum racemosæ. Fructus majusculi, terminales, solitarii. Arbores fruticesve inermes, foliis alternis.—*Amer. bor., Himalaya.*

9. Acanthosyris. Flores hermaphroditi. Pedunculi 1–3-flori in axillis inferioribus v. ad nodos vetustos. Arbor spinis brevibus axillaribus armata; foliis alternis.—*Amer. austr. extratrop.*

10. Comandra. Flores hermaphroditi. Cymulæ subterminales umbelliformes, v. pedunculi axillares 1–3-flori. Herbæ suffruticesve inermes, foliis alternis.—*Amer. bor., Europa.*

11. Santalum. Flores hermaphroditi. Paniculæ breves laxæ v. subracemosæ, axillares terminalesque. Ovarium junius liberum; placenta longe acuminata. Arbores fruticesve inermes, foliis sæpius oppositis.—*Reg. Indo-Austral., ins. Pacif.*

†† *Discus margine integer v. breviter lateque sinuato-sublobatus nec in lobos distinctos productus.*

12. Fusanus. Flores plerique hermaphroditi. Paniculæ subcymosæ, breves. Discus supra ovarium crateriformis v. late campanulatus. Arbores fruticesve (1) foliis alternis inflorescentia axillari; (2) foliis oppositis inflorescentia terminali.—*Nov. Zel., Australia.*

13. Colpoon. Flores plerique hermaphroditi. Paniculæ abbreviatæ v. cymæ densæ, terminales, sessiles. Discus concavus. Frutices foliis plerisque oppositis.—*Afr. austr.*

14. Nanodea. Flores plerique hermaphroditi, terminales, 1–3-ni, inter folia summa subsessiles. Discus concavus. Herba humilis, foliis alternis anguste linearibus. — *Terr. Magellan.*

15. Myoschilos. Flores hermaphroditi in spicis bracteatis amentiformibus ad nodos defoliatos sessilibus. Discus planus. Frutex foliis alternis parvulis planis.—*Chile.*

16. Buckleya. Flores dioici, ♂ umbellati, ♀ terminales solitarii. Discus late campanulatus. Drupa bracteis 4 foliaceis coronata. Frutices foliis oppositis.—*Amer. bor., Japonia.*

17. Osyris. Flores dioici, solitarii v. cymulosi. Discus subplanus. Drupa nuda v. foliis summis stipata. Frutices foliis alternis.—*Europa, Africa, Ind. or.*

18. Omphacomeria. Flores dioici, minuti, ad nodos sessiles v. ♂ glomerati. Discus subplanus. Frutices aphylli, ramis teretibus.—*Australia.*

** *Antherarum loculi divergentes v. terminales, discreti 2-valvesque v. in unum 2-valvem confluentes.*

19. Henslowia. Flores dioici v. monoici, ad axillas cymulosi fasciculati v. ♀ solitarii. *Endocarpium intus processibus duris in sulcis albuminis intrusum.* Frutices interdum parasitici, foliis alternis crassiusculis planis.—*Ind. or., China, Archip. Malay.*

20. Sclerofyron. Flores subdioici, ad nodos defoliatos breviter spicati. *Filamenta 2-fida.* Drupa majuscula, pyriformis. Arbores ad nodos sæpe spiniferæ, foliis alternis coriaceis.—*Ind. or.*

21. Choretrum. Flores hermaphroditi, minuti, secus ramos fasciculati v. solitarii, bracteis orbiculato-squamiformibus involucrati. Drupa parva. Frutices aphylli.—*Australia.*

22. Leptomeria. Flores hermaphroditi, minuti, in racemulos spiculasve terminales v. laterales conferti. Drupa parva. Frutices foliis bracteisque minute squamiformibus v. rarius lineari-teretibus.—*Australia.*

23. Phacellaria. Flores monoici, minuti, secus ramos sparsi, sessiles. Drupa parva. Fruticuli parasitici caulibus fasciculatis aphyllis.—*Birma.*

24. Myzodendron. Flores dioici, parvi, axillares v. in spiculas amentiformes conferti. Perianthium 0 in fl. ♂, adnatum margine brevissimo in fl. ♀. Filamenta filiformia, anthera terminali 1-loculari. Fructus parvus, setis lateralibus demum longis plumosis instructus. Suffrutices parvi, ramosissimi, in arboribus parasitici.—*Chile, Terr. Magell.*

Tribus III. Anthoboleæ. Perianthium usque ad discum 3–4-partitum. Ovarium superum, basi disco semi-immersum. Stigma sessile. Ovulum 1, centrale, erectum. Fructus plus minus drupaceus, omnino superus. Flores minimi.

25. Anthobolus. Flores dioici, ad axillas pedicellati, ♂ 2–5-ni, ♀ solitarii v. 2-ni. Drupa

pedicello incrassato carnoso insidens. Folia lineari-teretia v. ad squamas minutas reducta.—*Australia.*

26. Exocarpus. Flores hermaphroditi v. abortu masculi, in spiculis v. fasciculis ad axillas sessilibus. Drupa pedicello incrassato insidens. Folia lineari-teretia, plana, v. ad squamas minutas reducta.—*Australia, Nov. Zel., ins. Norfolk, Mascar., Archip. Malay. et Sandw.*

27. Champereia. Flores hermaphroditi (v. abortu ♂?) in paniculas axillares graciles dispositi. Folia alterna, plana. Pedicelli fructiferi non incrassati.—*Penins. et Archip. Malay.*

Tribus IV. (v. genus anomalum). **Grubbieæ.** Perianthii tubus ovario adnatus, lobis usque ad ovarium solutis. Stamina numero loborum duplo plura. Fructus (minimus) drupaceus.

28. Grubbia. Flores hermaphroditi, parvi, in axillis foliorum v. bractearum strobili pisiformis axillaris ternatim sessiles. Frutices ericoidei foliis oppositis angustis margine revolutis.—*Afr. austr.*

GENERA AFFINIA V. EXCLUSA AUT DUBIA.

Opilieæ, tribus **Olacinearum**, supra i. 349, *Anthoboleis* caute comparandæ, differunt calycis margine ad apicem ovarii plus minus distincto.

Pyrenacantha, Hook. (Adelanthus, Endl., Moldenhauera, Spreng.) quam supra i. 345 e tribu *Phytocreneacarum* **Olacinearum** rejecimus, rite a Baillono in DC. Prod. xvii. 9, ad illas revocatur, etsi calycis margo obsoletus sit. A *Santalaceis* recedit habitu, staminum situ, ovulorum insertione, embryone aliisque notis.

Modeccopsis, Griff., est *Erythropalum*, Blume, inter **Olacineas**, supra i. 347.

Decastrophia, Griff. Notul. iv. 737, t. 613, est *Erythropalum*, Bl., inter **Olacineas**, synonymon supra i. 347 casu omissum.

Cevallia, Lag., a Lindleyo olim *Santalaceis* adscripta, est **Loaseæ**, supra i. 803.

Octarillum, Lour. Fl. Cochinch. 90, videtur *Elæagni* species inter **Elæagnaceas**, supra, 204.

Tribus I. Thesieæ.

1. **Quinchamalium,** *Juss. Gen. Pl.* 75.—Flores hermaphroditi, in spica terminali conferti, urceolo truncato-dentato (bractea cum bracteolis connata) stipati. Perianthii tubus basi ovario adnatus, supra discum cylindraceus; lobi 5, valvati, recurvo-patentes. Stamina 5, ad basin loborum affixa iisque breviora, filamentis brevibus; antheræ lineari-oblongæ, basifixæ, loculis parallelis longitudinaliter dehiscentibus. Discus carnosulus, annularis v. cupularis, a perianthio distinctus. Ovarium inferum; stylus filiformis, stigmate subcapitato; ovula 3, ex apice placentæ brevis crassæ pendula, subimmersa. Fructus parvus, nuceus, subcarnosus, urceolo bracteino arcte inclusus, perianthio toto sæpe usque ad maturitatem persistente, v. demum parte libera circa discum circumscissa decidua. Semen conforme; embryo in centro albuminis carnosi parvus, linearis, radicula vix cotyledonibus longiore.—Herbæ humiles, glabræ, basi pluricaules v. decumbentes. Folia alterna, linearia v. subulata, integerrima. Flores in spica densa arcte sessiles v. foveolis rhacheos leviter immersi. Urceolus ovario subæquilongus, membranaceus, dente exteriore lateralibus majore, quarto postico minuto v. 0.

Species evidenter plurimæ, vix tamen limitibus certis distinguendæ, apud Miersio 7, ex Philippi 13, Americæ australis imprimis Chilensis et Andinæ australis incolæ. *A. DC. Prod.* xiv. 625. *Philippi in Bot. Zeit.* 1857, 745, *t.* 11. *Miers in Journ. Linn. Soc.* xvii. 134, *t.* 7. *Ruiz et Pav. Fl. Per. et Chil. t.* 107. *Lam. Illustr. t.* 142. *Brongn. in Duperr. Voy. Bot. t.* 51, 52.

Genus ab auctoribus Molinio tribuitur, sed genus Molinianum, calyce 5-fido corolla 5-fida stylis 3 capsula 3-loculari polysperma, plantam quamdam diversissimam refert hodie non determinandam. Jussieu primus genus nostrum constituit.

2. **Arjona,** *Cav. Ic.* iv. 57, *t.* 383.—Flores hermaphroditi, in spica terminali conferti, bractea bracteolisque liberis stipati. Perianthii tubus basi ovario adnatus, supra discum cylindraceus; lobi 5, valvati, recurvo-patentes. Stamina 5, apicem versus tubi infra faucem affixa, inclusa, filamentis brevibus; antheræ lineari-oblongæ, prope basin dorsifixæ, loculis parallelis longitudinaliter dehiscentibus. Discus pulvinatus v. crassiuscule annu-

laris, a perianthio distinctus. Ovarium inferum; stylus filiformis, stigmate capitato v. breviter 3-lobo; ovula 3, ab apice placentæ brevis crassæ pendula, subimmersa. Fructus parvus, nuceus, vix carnosulus, bractea convoluta bracteolisque arcte inclusus, glaber, nitidus, perianthio persistente coronatus v. demum denudatus. Semen conforme; embryo in centro albuminis carnosi parvus, linearis, radicula vix cotyledonibus longiore. —Herbæ humiles, sæpius ramosæ, quam in *Quinchamalio* rigidiores, præter inflorescentiam glabræ, radicibus sæpe hinc inde tuberiferis. Folia alterna, linearia v. lanceolata, rigidula, acuta, integerrima, sæpe recurva. Flores in spica brevi arcte sessiles, perianthio, basi adnata excepta, inflorescentiaque tota pubescentibus v. rarius glabris; perianthium intus ad faucem pilosulum.

Species 3 v. 4, apud Miersium 8, Americæ australis extratropicæ, imprimis Chili et Patagoniæ incolæ. *A. DC. Prod.* xiv. 626. *Hombr. et Jacq. Voy. Pole Sud Dicot. t.* 15. *Miers in Journ. Linn. Soc.* xvii. 129, *t.* 6.

3. **Thesium,** *Linn. Gen. n.* 292.—Flores hermaphroditi. Perianthii tubus basi adnatus, supra ovarium campanulatus v. cylindraceus, apice v. ad medium v. sæpe multo altius divisus; lobi 5 rarius 4, valvati, intus pone stamina fasciculo pilorum sæpius donati, interdumque ab apice reflexo-barbati. Stamina 5 rarius 4, basi loborum v. paullo infra affixa, filamentis tenuibus brevibus; antheræ ovatæ v. oblongæ, loculis parallelis longitudinaliter dehiscentibus. Discus epigynus inconspicuus v. cum perianthio continuus margine nullo prominente (v. rarius obscuro?). Ovarium inferum; stylus nunc elongatus nunc brevis, stigmate capitato v. obscure 3-lobo; ovula 2–3, ab apice placentæ tenuis sæpe flexuosæ v. contortuplicatæ pendula. Fructus nuceus, parvus, globosus v. ovoideus, extus vix carnosulus, perianthio persistente coronatus v. rarius demum denudatus, endocarpio crustaceo v. parum indurato. Semen conforme; embryo in centro albuminis carnosi teres, rectus v. parum curvus, sæpe obliquus, radicula cotyledonibus æquilonga v. longiore.—Herbæ basi sæpe duræ v. lignescentes, haud raro radicibus parasiticæ, rarius fruticuli. Folia alterna, linearia, sæpius parva, nunc ad squamas minutas reducta. Inflorescentia simpliciter spicata v. racemosa pedunculis unifloris, v. composita pedunculis cymoso-3-∞-floris. Bractea v. folium subtendens interdum pedunculo adnatum; bracteolæ sub flore solitario v. sub cymulo 2 oppositæ interdum deficientes.

Species ultra 100, in temperatis orbis veteris late dispersæ, inter tropicos pauciores, duæ solæ Brasilienses, cæterum in America tota desunt. *A. DC. Prod.* xiv. 637. *Nees, Gen. Fl. Germ. Monochl. n.* 48. *Reichb. Ic. Fl. Germ. t.* 541 *ad* 546; *Iconogr. Eur. t.* 452 *ad* 458. *Jacq. Fl. Austr. t.* 416. *Ten. Fl. Nap. t.* 220. *Guss. Pl. Rar. t.* 20. *Vis. Fl. Dalm. Suppl. t.* 4. *Tchihatch. As. Min. t.* 39. *Bong. et Mey. Verz. Pfl. Sais. Nor. t.* 13. *Ledeb. Ic. Fl. Ross. t.* 233, 237. *Wight, Ic. t.* 1852.

R. Brown in Prod. Fl. N. Holl. 353, sectiones 3 (sine nomine) indicavit, quarum una, *Frisea*, Endl., facile distincta est perianthii lobis intus barba densa ex apice et marginibus pendente vestitis; antheræ etiam sæpius (an semper?) magis reversæ videntur. Species omnes austro-Africanæ, adhuc icone nulla illustratæ. Cæteræ duæ sectiones, imprimis perianthio lobato v. partito distinctæ, limitibus certis non definiendæ sunt, et a Candollio quoad species plerasque sub *Euthesio* includuntur, perianthii segmentis præter fasciculum pilorum ad basin pone stamina glabris et ad hanc sectionem pertinent icones omnes supra citatæ. Species tamen paucas separavit idem auctor in Prodromo characteribus minoris valoris scil. *Chrysothecium*, Jaub. et Spach, Ill. Pl. Br. t. 104, et 300, species 2 orientales parte supera perianthii tubi elongata tenuique dum in cæteris speciebus sæpissime lobis brevior est, ratione tamen in variis speciebus valde diversa, *Ætheothesium*, DC., species unica austro-Africana, foliis latis crassis amplexicaulibus et bracteis amplis insignis, characteribus tamen nullis certis ab aliis pluribus distinguenda; *Discothesium*, A. DC., species 4 austro-Africanæ, disco epigyno margine leviter prominulo discreto, quod tamen in speciebus tribus a nobis examinatis vix confirmare possumus. Discum in his speciebus solito crassiorem vidimus sed more generis cum perianthii tubo perfecte continuum et habitus omnino *Euthesii*. Inflorescentia tamen specierum plurium austro-Africanarum peculiaris est, et *Euthesia* gerontogea, a *Friseis* separata, sectiones cæteras Candollei includentia, in subsectiones duas distribuenda videntur: 1. *Euthesium* pedunculis (sæpius 1-floris interdum etiam cymuloso-pluriflores) ad axillas dissitis v. in spicam tenuem simplicem terminalem approximatis,

species numerosæ per orbem veterem Africa capensi inclusa latissime dispersæ. 2. *Æthcotheseum.* cymulis terminalibus v. in soliis summis axillis confertis, cymam terminalem compactam v. capitulum terminale formantibus, species omnes austro-Africanæ e.g. *T.* (*Euthesium,* DC.) *strictum, paniculatum,* affinesque, *T.* (*Æthcothesium,* DC.) *euphorbioides, T.* (*Discothesium,* DC.) *triflorum,* aliæque nonnullæ.

Sectio *Psilothesium,* A. DC. Prod. xiv. 670, et in Mart. Fl. Bras. v. i. t. 37, species 2 Brasilienses continet, ab *Euthesiis* gerontogeis paullo distinctas caule annuo tenui virgatim ramoso, foliis ad squamellas minutas dentesve reductis, floribus parvis gracile spicatis, perianthio sæpius 5-mero, ex DC. a fructu maturo deciduo, in speciminibus tamen nostris utriusque speciei perianthium in fructu perfecto persistens vidimus, et interdum etsi rarius in *Euthesiis* gerontogeis fructus hinc inde perianthio delapso denudatus est.

Rhinostegia, *Turcz. in Bull. Soc. Imp. Nat.* 1843, 56, ab A. DC. rite ad *Thesium* reducitur. *R. brevifolia,* Turcz., est *T. Dregeanum,* A. DC.; *R. longifolia,* Turcz., nobis ignota est.

4. **Thesidium,** *Sond. in Flora,* 1857, 364.—Flores dioici. Perianthii tubus in flore ♂ tenuis solidus, in flore ♀ ovoideus, ovario adnatus, supra ovarium brevissime campanulatus v. vix ullus; lobi 4, valvati, in flore ♂ sæpius fasciculo pilorum pone stamina instructi. Stamina 4, ad basin loborum affixa, filamentis brevibus; antheræ parvæ, loculis parallelis longitudinaliter dehiscentibus; in flore ♀ staminodia sæpius 0. Discus obscurus, margine nullo prominulo. Ovarium inferum; stylus brevis, stigmate obscure 2–3-lobo; ovula 2–3, ab apice placentæ centralis filiformis rectæ v. contortuplicatæ pendula. Fructus nuceus *Thesii,* parvus, globosus v. ovoideus, perianthio marcescente coronatus, endocarpio crustaceo. Semen conforme; embryo in centro albuminis carnosi teres, sæpe obliquus.—Fruticuli humiles, ramosissimi, rarius herbæ. Folia alterna, sæpius minima v. squamiformia, rigidula. Flores minimi, nunc intra bracteas solitarii subsessiles in spicam terminalem tenuem interruptam dispositi, nunc secus ramos intricatos ad axillas sessiles, solitarii v. terni, numerosissimi. Bracteæ bracteolæque minimæ.

Species enumeratæ 6, Africæ australis incolæ. *A. DC. Prod.* xiv. 673. Genus a *Thesio* imprimis floribus dioicis differt. Habitus etiam satis diversus, interdum fere salsoloideus.

5? **Osyridicarpos,** *A. DC. Prod.* xiv. 635.—Flores hermaphroditi. Perianthii tubus basi ovario adnatus, supra ovarium cylindraceus, fere ad apicem carnosulus, summo apice tenuis; lobi 5, tenues, valvati, intus basi fasciculo pilorum instructi. Stamina 5, summo tubo sub lobis affixa, filamentis brevibus tenuibus; antheræ ovatæ, loculis parallelis longitudinaliter dehiscentibus. Discus indistinctus, nisi pro disco haberes partem carnosam perianthii apice inter stamina sinuato-5-lobam, margine tamen haud prominulam. Ovarium inferum; stylus elongatus, tenuis, stigmate capitellato v. obscure 2–3-lobo; ovula 2–3, ab apice placentæ filiformis flexuosæ pendula. Drupa (a nobis non visa) fere *Osyridis* ex vestigio perianthii cupula 5-angulari minima coronata (*A. DC.*).—Suffrutices glabri, ramis laxis interdum elongatis subscandentibus. Folia alterna, breviter petiolata, lanceolata v. ovata, plana. Flores ad axillas solitarii v. 3–5-ni, breviter pedicellati, bracteolis minimis v. 0. Perianthii tubus sæpius (nec constanter) extus ad basin partis liberæ verrucis v. appendiculis carnosulis 4–5 subreflexis instructus.

Species 2, inter se valde affines, altera austro-Africanæ, altera Abyssinica.

Genus *Thesieas* cum *Osyrideas* arcte connectit. Specimina nostra omnia florida primo aspectu *Thesium* referunt et sub *Thesio* a variis collectoribus missa. Folia tamen, et ex DC. fructus, potius *Osyridis,* et si partem carnosam perianthii pro disco haberes (in vivo perianthium quasi calycem corollæ adnatum simulat ex Burchellio) genus forte *Osyrideis* transferendum foret.

Tribus II. Osyrideæ.

6. **Cervantesia,** *Ruiz et Par. Prod.* 39, *t.* 7; *Fl. Per. et Chil.* iii. 19, *t.* 241.—Flores hermaphroditi. Perianthii carnosuli tubus basi ovario adnatus, supra ovarium breviter campanulatus, post anthesin facile fere a basi in segmenta solvendus; lobi 5, valvati, usque ad discum soluti, intus pone stamina fasciculo parvo pilorum instructi. Stamina 5, basi loborum affixa, filamentis brevibus; antheræ oblongæ, loculis parallelis

longitudinaliter dehiscentibus. Discus perianthii tubum vestiens, margine inter stamina in lobos carnosulos squamiformes ovatos v. oblongos productus. Ovarium primum in fundo perianthii fere liberum, mox basi accrescens semi-inferum, ante maturitatem jam fere inferum; stylus brevis, crassiusculus, stigmate 2–3-lobo; ovula 2–3, ex apice placentæ longe filiformis contortuplicatæ pendula. Fructus subglobosus, exocarpio carnoso in segmenta 5 a basi sæpe solvenda subdiviso, endocarpio crustaceo sæpius inter exocarpii segmenta demum fisso fere 2–3-valvi. Semen subglobosum; embryo linearis, subteres, longiusculus, in albumine carnoso obliquus.—Arbor, ramulis novellis inflorescentiis foliorumque pagina inferiore plus minus ferrugineo-tomentosis villosisve. Florum cymulæ v. fasciculi densæ, ad axillas sessiles v. in spica brevi secus rhachin plures sessiles; spicæ ad axillas sessiles v. superiores in panicula terminali plures.

Species distinguit Miers 3, sed omnes unius formæ videntur, Andium Columbiæ, Ecuadoræ et Peruviæ incolæ. *A. DC. Prod.* xiv. 692. *Cav. Ic. t.* 475. *Miers in Journ. Linn. Soc.* xvii. 78, *t.* 3. Miers l. c. *Cervantesiam* et *Iodinam* a *Santalaceis* ad *Styracaceas* transfert, lobis squamiformibus disci pro petalis perperam descriptis. Hæ squamæ, cum margine disci continuæ, omnino similes sunt iis *Santali* et *Comandri*, dum stamina certe extra discum affixa sunt etsi disco arcte contigua, ut in omnibus generibus subtribus *Osyridearum*. Ovarium in alabastro liberum apparet omnino ut in *Santalo*. Squamellæ, in facie interiore segmentorum perianthii fructiferi a Miersio descriptæ, sunt vestigia persistentia filamentorum post antheras delapsas. Cæterum *Cervantesia* et *Iodina* ab omnibus affinibus differunt exocarpio (perianthii tubo) insigniter 5-sulcato facile in segmenta totidem solvendo, etsi vix nisi basi sponte separatur.

7. **Iodina,** *Hook. et Arn. in Hook. Bot. Misc.* iii. 172.—Flores hermaphroditi. Perianthii tubus basi ovario adnatus, post anthesin facile solvendus, supra ovarium brevissime lateque campanulatus; lobi 5, valvati, fere induplicati, usque ad discum soluti, pone stamina fasciculo pilorum instructi. Stamina 5, basi loborum affixa, filamentis brevibus; antheræ ovato-oblongæ, loculis parallelis longitudinaliter dehiscentibus. Discus crateriformis, perianthii partem liberam vestiens, margine inter stamina in lobos squamiformes crassiusculos rotundatos productus. Ovarium in alabastro semi-inferum, mox fere inferum; stylus longiuscule conicus, stigmate 3-fido; ovula 3, ab apice placentæ centralis rectæ pendula. Fructus globosus, exocarpio tenuiter carnoso facile in segmenta 5 solubili, endocarpio crustaceo interdum inter exocarpii segmenta fisso fere 2–3-valvi. Semen globosum; embryo brevis, in centro albuminis carnosi obliquus, radicula clavata cotyledonibus linearibus longiore.—Frutex elatus, glaber. Folia alterna, rhombea, rigide coriacea, angulis spinescentibus, basi in petiolum brevem contracta. Cymulæ ad axillas sessiles, densæ, paucifloræ, floribus tenuissime puberulis. Fructus sæpe ad axillas abortu solitarii.

Species 1, in America australi extratropica a Montevideo usque ad Aconcagua Andium frequens. *Reissek in Mart. Fl. Bras.* xi. 77, *t.* 23. *Miers in Journ. Linn. Soc.* xvii. 83, *t.* 4.

8. **Pyrularia,** *Mich. Fl. Bor. Amer.* ii. 231. (Hamiltonia, *Muehlenb. in Willd. Spec. Pl.* iv. 1114. Sphærocarya, *Wall. in Roxb. Fl. Ind. ed. Car. et Wall.* ii. 371; *Tent. Fl. Napal. t.* 10.)—Flores abortu subdioici, fertiles sæpe hermaphroditi. Perianthii tubus in flore ♂ brevissimus solidus, in flore fertili turbinatus, ovario adnatus; lobi 5, patentes, valvati, usque ad discum soluti, intus pone antheras fasciculo pilorum v. squama pilosa antheris adhærente instructi. Stamina 5, basi loborum affixa, in flore fertili minora, filamentis brevibus; antheræ ovatæ, loculis parallelis longitudinaliter dehiscentibus (in flore fertili cassæ?). Discus parum prominulus, inter stamina in squamas distinctas productus. Ovarium inferum; stylus columnaris, stigmate depresso-capitato obscure lobato; ovula 2–3, ab apice placentæ brevis rectæ pendula. Drupa obovoidea v. subglobosa, majuscula, perianthii lobis persistentibus coronata v. vix demum denudata, exocarpio carnoso, endocarpio duro haud crasso. Semen globosum; embryo prope apicem albuminis carnosi brevis, subteres.—Arbores fruticesve. Folia annua, alterna, breviter petiolata, membranacea. Flores in summis axillis v. ad apices ramorum cymulosi, cymulis racemum

terminalem compositum seu paniculam racemiformem formantibus; flores fertiles sæpe ad apices ramorum pauciores, sæpius gemini v. solitarii. Bracteolæ parvæ.

Species 2, altera boreali-Americana, altera Himalaica. *A. DC. Prod.* xiv. 628 (*quoad sp.* 1 *et* 2). *Wight Ic. t.* 255 (*icon a Wall. Tent. iterata*). Flores ♀ v. ☿ nobis desunt, eorum char. ex auctoribus citatis v. e reliquiis in fructu persistentibus sumpsimus.

9. **Acanthosyris,** *Griseb. Symb. Fl. Argent.* 151. (Osyris *sect., Eichl. in Mart. Fl. Bras.* xiii. i. 236, *t.* 53.)—Flores hermaphroditi. Perianthii tubus basi late turbinatus ovario adnatus, supra ovarium breviter lateque campanulatus; lobi 5 rarius 4, usque ad discum soluti, valvati, pone stamina fasciculo pilorum antheris adhærente instructi. Stamina 5 rarius 4, basi loborum affixa, filamentis brevibus tenuibus; antheræ ovatæ, loculis parallelis longitudinaliter dehiscentibus. Discus perianthii tubi partem liberam vestiens, margine inter stamina in squamas distinctas productus. Ovarium semi-inferum; stylus longiusculus, stigmate obscure 2-3-fido; ovula 2-3, a placenta centrali apice ultra ovula obtuse producta pendula, arcte reflexa. Drupa, a nobis non visa, globosa, ½ poll. diametro, perianthii reliquiis (lobis deciduis) coronata, endocarpio firmiter lignoso.—'Arbores elatæ, pulchræ nunc in fruticem 6-pedalem reductæ,' habitu fere *Celastri*, spinis brevibus axillaribus (pedunculis abortivis?) nunc minimis v. raris armatæ, rarius inermes. Folia alterna, ad nodos vetustos sæpe fasciculata, oblonga, rigidule membranacea, basi in petiolum brevissimum contracta. Pedunculi graciles, foliis breviores, 1-3-flori, in axillis foliorum inferiorum innovationis v. sæpius cum foliis ad nodos vetustiores fasciculati. Bracteolæ minutæ v. 0.

Species 2, Brasiliæ australis et Reipublicæ Argentinæ incolæ.

Spinæ *A. spinescentis*, Griseb., semper more pedunculorum ad axillas v. paullo supra axillas oriuntur, sed in ramis annotinis folio subtendente delapso et fasciculo foliorum superne evoluto infrafoliaceæ apparent. In speciminibus nostris ut in icone citata ovulum unum cæteris altius affixum videtur, sed revera est potius apex placentæ ultra ovula productus.

10. **Comandra,** *Nutt. Gen. N. Am. Pl.* i. 157. (Hamiltonia, *Spreng. Syst.* i. 831 *pro parte.*) —Flores hermaphroditi. Perianthii tubus basi ovario adnatus, supra ovarium campanulatus; lobi 5, rarius 4, usque ad discum soluti, valvati, pone stamina fasciculo pilorum antheris adhærente instructi. Stamina 5 rarius 4, basi loborum affixa, filamentis brevibus crassiusculis; antheræ ovatæ, loculis parallelis longitudinaliter dehiscentibus. Discus perianthii tubum vestiens, margine inter stamina in squamas rotundatas distinctas productus. Ovarium inferum; stylus longiusculus, stigmate capitellato; ovula 2-3, ab apice placentæ linearis interdum flexuosæ pendula, v. sub apice placentæ crassioris affixa. Drupa ovoidea v. globosa, exocarpio tenuiter carnoso v. succulento, endocarpio crustaceo haud crasso. Semen globosum; embryo in albumine carnoso subteres.—Herbæ suffruticesve erecti, glabri. Folia alterna, angusta v. ovali-oblonga. Cymæ terminales umbelliformes, v. laterales pauciflorae, ebracteolatæ.

Species 4, quarum 1 Europæa, cæteræ boreali-Americanæ. *A. DC. Prod.* xiv. 636 (*excl. sect.* 2). *Reichb. Ic. Fl. Germ. t.* 547 (*Hamiltonia*). *Hook. Fl. Bor. Amer. t.* 179.

Formæ duæ adsunt sectiones bene distinctas præbentes. 1. *Eucomandra*, caulibus sæpius ramosis, cymulis ad apices ramorum v. in summis axillis 3-5-floris umbelliformibus, ovarii placenta lineari, fructu ovoideo parum carnoso perianthii reliquiis coronato. Species Europæa cum 2 Americanis inter se valde affines. 2. *Haplocomandra*, caulibus e basi perenni sæpius pluribus simplicibus, pedunculis axillaribus gracilibus 1-3-floris, ovarii placenta crassiore, fructu globoso maturo denudato, exocarpio succulento. Species Americana (*C. livida*, Richards.).

11. **Santalum,** *Linn. Gen. n.* 480. (Sirium, *Schreb. Gen. Pl.* 82.)—Flores hermaphroditi. Perianthii tubus campanulatus v. ovoideus, ima basi ovario adnatus; lobi 4 rarius 5, usque ad discum soluti, valvati, intus pone stamina fasciculo pilorum instructi. Stamina basi loborum affixa iisque breviora, filamentis brevibus; antheræ ovatæ, loculis parallelis longitudinaliter dehiscentibus. Discus tubum perianthii tenuiter vestiens, inter stamina in squamas distinctas carnosulas spathulatas triangulares v. fere quadratas productus.

Ovarium primum in fundo perianthii fere liberum, mox basi accrescens semi-inferum; stylus elongatus, stigmate breviter 2–3-lobo; ovula 2–3, infra medium placentæ centralis longe acuminatæ affixa, arcte reflexa. Drupa subglobosa, cicatrice annulari perianthii delapsi coronata, exocarpio haud crasso, endocarpio duro sæpius rugoso. Semen subconforme; embryo in centro albuminis rectus v. obliquus, linearis, teres, radicula cotyledonibus multo longiore.—Arbores fruticesve glabri. Folia opposita v. rarius alterna, petiolata, integerrima, coriacea v. subcarnosa, pennivenia sed costa sola sæpius conspicua. Flores quam in generibus affinibus sæpius majores, in axillis superioribus v. ad apices ramorum trichotome paniculati, paniculis laxiusculis at sæpius foliis brevioribus v. interdum ad racemos simplices reductis. Bracteæ inconspicuæ.

Species ad 8, inter se valde affines, Indiæ orientalis, Archipelagi Malayani, Australiæ et ins. maris Pacifici incolæ. *A. DC. Prod.* xiv. 682 (*sect.* 1, § 1). *Benth. Fl. Austral.* vi. 213. *Griff. in Trans. Linn. Soc.* xvii. 59, *t.* 1, 2. *Henfr. in Trans. Linn. Soc.* xxii. 69, *t.* 17, 18. *Roxb. Corom. Pl. t.* 2 (*Sirium*). *Hayne, Arzneigew.* x. *t.* 1, 2. *Bot. Mag. t.* 3235. *Gaudich. in Freyc. Voy. Bot. t.* 45. *Seem. Fl. Vit.* 210, *t.* 55. *Bedd. Fl. Sylv. t.* 256.

12. **Fusanus,** *R. Br. Prod.* 355, *excl. syn. Linn. et Berg.* (Eucarya, *Mitch. Three Exped. Austral.* ii. 100 ?)—Flores hermaphroditi v. abortu masculi. Perianthii tubus ovario adnatus, supra ovarium crateriformis v. breviter latissimeque subcampanulatus; lobi 4, usque ad discum soluti, valvati, intus pone stamina fasciculo pilorum instructi. Stamina basi loborum affixa iisque breviora; antheræ ovatæ, loculis parallelis longitudinaliter dehiscentibus. Discus calycis tubi partem superam vestiens, margine continuo sinuato nec in squamas producto. Ovarium inferum; stylus brevissimus, conicus, stigmate parvo 2–3-lobo; ovula 2–3, a placenta centrali crassiuscula apice obtusa v. vix acuminata pendula, arcte reflexa. Drupa globosa v. ovoidea, cicatrice annulari perianthii delapsi coronata, exocarpio carnoso, endocarpio duro extus foveolato v. rugoso. Semen globosum; embryo in centro albuminis linearis, teres, rectus v. vix incurvus.—Arbores fruticesve glabri. Folia opposita v. alterna. Flores quam in *Santalo* minores, trichotome paniculati v. subcymosi.

Species 5, Australasicæ, in sectiones 2 facile pro generibus propriis habendas distribuendæ.

1. *Eufusanus.* Species 4, omnes Australianæ, foliis oppositis, inflorescentia terminali, perianthii parte discifera breviter lateque concava, placenta apice interdum breviter acuminata, drupa globosa exocarpio carnoso, endocarpio crasso osseo. Santali sect. 1, § 2, *A. DC. Prod.* xiv. 684. Fusanus, *R. Br. l.c.*; *Benth. Fl. Austral.* vi. 215.

2. *Mida.* Species 1, Novo-Zelandica, foliis alternis, inflorescentia axillari, perianthii parte discifera magis evoluta, placenta apice obtusa supra ovula parum producta, drupa fere ovoidea, pericarpio minus incrassato. Santali sect. 2, *A. DC. Prod.* xiv. 686. *Hook. Ic. Pl. t.* 563, 575. Mida, *A. Cunn. in Ann. Nat. Hist. ser.* 1, i. 376.

In seminibus paucis *Eufusani* examinatis cotyledones brevissimas vidimus, in unico perfecto *Midæ* cotyledones radicula paullo longiores erant.

13. **Colpoon,** *Berg. Pl. Cap.* 38, *t.* 1. (Fusanus, *Murr. Syst. Veg. Linn. ed.* 1744, 765.) —Flores hermaphroditi v. rarius abortu masculi. Perianthii tubus ovario adnatus, supra ovarium breviter expansus; lobi 4–5 rarius 6, usque ad discum soluti, valvati, intus pone stamina fasciculo pilorum instructi. Stamina basi loborum affixa iisque breviora, filamentis tenuibus brevibus; antheræ ovatæ, loculis parallelis longitudinaliter dehiscentibus. Discus latus, concavus, inter stamina in lobos latos brevissime productus. Ovarium inferum; stylus conico-cylindraceus, stigmate brevissime 4–5-lobo; ovula 4–5, a placenta centrali crassiuscula obtusa ultra ovula brevissime v. longiuscule producta pendula, arcte reflexa. Drupa ovoidea, perianthii lobis persistentibus v. cicatrice annulari delapsorum coronata, exocarpio carnosulo v. subsucculento, endocarpio rigide crustaceo (v. interdum osseo ?). Semen globosum; embryo in centro albuminis carnosi obliquus, teres (in semine unico perfecto examinato) vix apice in cotyledones divisus.—Frutices glabri, nunc dense ramosi nunc ramis laxis subscandentes (*Burchell*). Folia opposita v. in ramulis vegetioribus rarius subalterna, ovata, rigida, crassiuscula. Flores in paniculas breves thyrsoideas v. subcymosas terminales dispositi.

Species 2 v. 3, Africæ australis incolæ, a Candollio in genera duo separatæ, a Baillono, Adans. iii. 112, in unum conjunctæ. In forma typica, *Colpoon*, Berg., *Osyridis* sect. A. DC. Prod. xiv. 634, flores plerique 4-meri (paucos tamen 5-meros inter 4-meros vidimus) et perianthium a fructu maturo deciduum, et hic forte species 2 latent imprimis fructu distinctæ. In sectione *Rhoiacarpo*, flores plerique 5-meri, interdum tamen 4-meri v. 6-meri et perianthium marcescens in fructu persistens; species unica. RHOIACARPOS, *A. DC. Prod.* xiv. 634. HAMILTONIA, *Harv. Gen. Pl. Cap.* ed. i. 298, *non aliorum*.

Colpoon, Berg., a Brownio cum *Fusano* suo jungitur, a Candolleo cum *Osyride*, a Baillono cum *Rhoiacarpo*, et omnes fere æquo jure. Genera enim v. sectiones *Anosyris*, *Santalum*, *Comandra*, *Fusanus*, *Mida*, *Colpoon*, *Rhoiacarpus* et *Osyris* inter se valde affinia, melius sectiones unius generis censenda forent, vix tamen sperandum est botanicos *Santalum album* accipere pro specie *Osyridis*, v. *Osyridem albam* pro specie *Santali*, et coacti sumus genera plura admittere characteribus levioris momenti separata.

14. **Nanodea**, *Banks*; *Gærtn. f. Fruct.* iii. 251. *t.* 225.—**Flores hermaphroditi (v. abortu masculi ?). Perianthii tubus turbinatus, ovario adnatus, supra ovarium brevissime expansus; lobi 4, valvati, usque ad discum soluti, ima basi abrupte contracti quasi brevissime lateque stipitati. Stamina 4, basi loborum affixa, filamentis brevissimis crassiusculis; antheræ ovatæ, loculis parallelis longitudinaliter dehiscentibus. Discus explanatus, concavus, partem liberam perianthii vestiens, inter stamina angulatus v. vix brevissime lobatus. Ovarium inferum; stylus breviter conicus, stigmate brevissime 2-lobo; ovula 2, ex apice placentæ brevis rectæ pendula. Drupa globosa, exocarpio succulento, endocarpio osseo crassiusculo. Semen globosum; embryo in albumine carnoso brevis, subteres, cotyledonibus parvis.—Herba nana multicaulis v. cæspitosa. Folia alterna, anguste linearia. Flores parvi, ad apices caulis v. ramorum sæpius terni, inter folia suprema sessiles iisque breviores, cymula 2-bracteolata. Drupa sæpius solitaria floribus lateralibus abortientibus, foliis ultimis arcte stipata.**

Species 1, Americæ australis Magellanicæ incola. *A. DC. Prod.* xiv. 675. *Gaudich. in Ann. Sc. Nat. ser.* 1, v. *t.* 2, *f.* 3.

15. **Myoschilos**, *Ruiz et Pav. Prod.* 41, *t.* 34; *Syst. Veg.* 73; *Fl. Per. et Chil. t.* 242.—**Flores hermaphroditi. Perianthii tubus ovario adnatus, late turbinatus; lobi 5, usque ad ovarium soluti, valvati, glabri. Stamina 5, basi loborum affixa iisque breviora, filamentis filiformibus; antheræ parvæ, ovatæ, loculis parallelis longitudinaliter dehiscentibus. Discus latus, planus, crassiusculus. Ovarium inferum; stylus breviter filiformis, stigmate patentim 3-lobo; ovula 3, ab apice placentæ brevis pendula. Fructus ovoideo-globosus, tenuiter carnosus v. subdrupaceus, bracteis bracteolisque basi stipatus, perianthii lobis diu persistentibus v. sæpius lobis longe ante maturationem deciduis cicatrice annulari coronatus. Semen (perfecte maturum non vidimus) rotundatum, embryone parvo cylindraceo intra albumen carnosum (*C. Gay*).—Frutex ramosus, glaber. Folia alterna, parvula, ovalia v. ovali-oblonga, membranacea, integerrima. Ramuli floriferi v. spicæ amentiformes, breviter cylindracei, aphylli, ad nodos defoliatos ramorum annotinorum sessiles. Flores in amento sessiles, parvi, arcte conferti, singuli bractea bracteolisque latis inclusi.**

Species 1, Chilensis. *A. DC. Prod.* xiv. 627 (*Myoschylos*). *Miers in Journ. Linn. Soc.* xvii. 127. *t.* 5. Miers l. c. aliisque locis *Myoschilum*, *Arjonam* et *Quinchamalium* ad *Olacineas* tradit, bractea bracteolisque pro calyce descriptis, cui assentiri nequimus, nam bractea e rhachi spicæ oriunda est, etsi ut in *Thesio* aliisque pedicello (in his generibus vix evoluto) interdum adnata, dum bracteolæ e pedicello ipso oriuntur.

16. **Buckleya**, *Torr. in Sillim. Journ.* xlv. 170. (Nestronia, *Raf. N. Sylv. Amer.* 12, *pro parte ex char. fl.* ♂. Quadriala, *Sieb. et Zucc. Fam. Nat. Fl. Jap.* i. 80, *t.* 2.)—**Flores dioici, masculi umbellati ebracteati, fœminei solitarii 4-bracteati. Fl. ♂: Perianthium campanulatum, 4-fidum, lobis subvalvatis v. leviter imbricatis, uno sæpius exteriore. Stamina 4, ad basin loborum affixa iisque breviora, filamentis filiformibus; antheræ parvæ, loculis parallelis longitudinaliter dehiscentibus. Discus tubum perianthii vestiens, inter**

lobos perianthii angulatus v. vix in dentes v. squamellas brevissime productus. Fl. ♀: Perianthii tubus ovario adnatus, lineari-obconicus, supra ovarium brevissime explanatus, extus sub lobis bracteis 4 iis alternis appendiculatus; lobi 4, breves lati, valvati. Staminodia 0. Ovarium inferum; stylus brevis, stigmate parvo 2–4-lobo; ovula 3–4, minima, vix ante fecundationem conspicua, ab apice placentæ centralis brevis crassæ pendula. Fructus ovoideus v. oblongus, bracteis 4 auctis rigide foliaceis stellato-patentibus diu persistentibus coronatus, perianthii limbo jam prius delapso, exocarpio carnoso haud crasso, endocarpio subcrustaceo. Semen conforme; embryo in axi albuminis carnosi angustus, albumine parum brevior, cotyledonibus lineari-sublanceolatis planis, radicula brevi supera.—Frutices elati, ramosi, glabri. Folia opposita v. rarius sparsa, breviter petiolata, acuminata, integerrima, pennivenia. Flores ♂ parvi, umbellulis in axillis summis v. ad apices ramulorum pedunculatis; ♀ ad apices ramulorum solitarii breviter pedicellati.

Species 2 v. 3, quarum una Japonica, 1 v. 2 boreali-Americanæ, omnes inter se parum distinctæ. *A. DC. Prod.* xiv. 623. *A. Gray in Sillim. Journ. ser.* 2, xviii. 98.

Appendices foliaceæ florum ♀ quas bracteas nuncupamus uti jam indicavit A. Gray l. c., a nonnullis pro sepalis descriptæ sunt; paullo infra apicem tubi adnati perianthii affixæ sunt, lobis perianthii alternæ, basi articulatæ. In specie Americana, *B. distichophylla*, perianthii tubus adnatus sub anthesi ecostatus est obscure obtuseque 4-gonus, angulis bracteis respondentibus; in specie Japonica, *B. quadriala*, tubus adnatus 8-costatus apparet, costis 4 a bracteis descendentibus multo magis prominentibus quam 4 alternæ. In utraque specie fructus subæqualiter 8-costatus est. Folia summa floralia plantæ ♀ basi ovario breviter adnata etiam in *Osyride alba* observantur.

Darbya, *A. Gray in Sillim. Journ. ser.* 2, i. 388, cujus flores ♂ soli noti sunt, ab A. DC. ad *Comandram* relata, nobis omnino cum charactere generico *Buckleyæ* convenire videtur, et habitus inflorescentiaque eadem; tubus perianthii minus explanatus est. Fructus diversus dicitur, sed non nisi verbis incertis collectoris notus, et genus adhuc valde dubium remanet.

17. **Osyris**, *Linn. Gen. n.* 1101.—Flores subdioici, fertiles tamen sæpius hermaphroditi. Perianthii tubus in flore ♂ brevissimus solidus, in flore fertili ovario adnatus, lobi 3 v. 4; late triangulares, usque ad discum soluti, valvati, intus pone stamina fasciculo pilorum instructi. Stamina 3 v. 4, basi loborum affixa iisque breviora, filamentis crassiusculis; antheræ ovatæ, loculis discretis subparallelis longitudinaliter dehiscentibus. Discus subplanus, inter stamina angulatus. Ovarium inferum; stylus longiuscule conicus v. brevissimus, stigmate 3–4-fido; ovula 2–4, a placenta centrali brevi crassa pendula. Fructus globosus v. breviter ovoideus, perianthii lobis persistentibus v. sæpius lobis demum deciduis cicatrice parva coronatus, exocarpio carnosulo v. fere succulento, endocarpio crustaceo. Semen globosum; embryo in centro albuminis carnosi rectus v. leviter incurvus, obliquus, teres v. angustus, cotyledonibus radicula multo longioribus interdum leviter dilatatis.—Frutices glabri. Folia alterna, angusta v. ovata, chartacea v. crassiuscula, integerrima. Flores parvi, ad axillas cymulosi v. ♂ in racemulum foliatum conferti, fertiles interdum solitarii, bracteis parvis caducis.

Species 5 v. 6, Europæ australis, Africæ fere totæ et Indiæ orientalis incolæ. *A. DC. Prod.* xiv. 633 (*sect.* 1). *Dcne. in Ann. Sc. Nat. ser.* 2, vi. *t.* 6.

Genus formas 2 sat distinctas præbet. In specie typica Europæa, *O. alba*, Linn., rami virgati spartioidei, folia parvula angusta, flores ♂ foliis bracteiformibus subtensi, in ramulos breves racemiformes dispositi; flores fertiles solitarii in ramulis brevibus sæpe subterminales, fructu inter folia floralia 2–3 persistentia subsessili v. interdum folia summa perianthii basi subadnata. *Nees, Gen. Fl. Germ. Monochl. n.* 49. *Reichb. Ic. Fl. Germ. t.* 548. *Sibth. Fl. Græc. t.* 954. In speciebus Africanis et Asiaticis rami laxiores, folia latiora plana sæpe crassiuscula, flores utriusque sexus in pedunculo tenui pauci cymulosi rarius solitarii, stylus brevissimus, stigmate sæpe in disco fere sessili, fructus a foliis plus minus distans. *Wight, Ic. t.* 1853. *O. abyssinica*, Hochst., in Africa australi Natalensi sat frequens, in herbariis cum *Colpoone compresso* sæpe confusa, facile distinguitur foliis omnibus alternis, floribus sæpissime 3-meris, notisque genericis.

18. **Omphacomeria**, *A. DC. Prod.* xiv. 680.—Flores polygami sæpius abortu dioici v. rarius monoici. Perianthii tubus in flore ♂ subnullus, in flore ♀ ovario adnatus, ovoideus;

lobi 4 v. 5, usque ad discum soluti, valvati, apice vix inflexi. Stamina 4 v. 5, prope basin loborum affixa, filamentis brevibus; antheræ ovatæ, loculis parallelis longitudinaliter dehiscentibus; staminodia in flore ♀ parva v. 0. Discus subplanus, vix ovario latior. Ovarium inferum; stylus brevissimus, stigmate 2-lobo; ovula 2 (v. 3?) ab apice placentæ minutæ centralis pendula. Drupa ovoidea v. globosa, perianthii lobis coronata, exocarpio succulento, endocarpio crustaceo. Semen conforme; albumen copiosum carnosum; embryo minutus? in seminibus 2 examinatis frustra quæsivimus.—Frutices omnino aphylli, habitu *Leptomeriæ*, ramis virgatis teretibus, nodis glanduliformibus nequidem squamiferis. Flores minuti, ad nodos sessiles, ♂ fasciculati, ♀ v. ☿ solitarii, disco minimo insidentes, ebracteati. Baccæ quam in *Leptomeriis* plerisque majores.

Species 2, Australianæ. *Benth. Fl. Austral.* vi. 225. *Hook. Ic. Pl. t.* 1172.

19. **Henslowia**, *Blum. Mus. Bot. Lugd. Bat.* i. 242, *t.* 43. (Dendrotrophe, *Miq. Fl. Ind. Bat.* i. i. 779. Tupeia, *Blum. Fl. Jav. Lor. t.* 27, 28. *Korth. in Verhandl. Batav. Genootsch.* xvii. 185 *ad* 196, *non Cham. et Schl.*)—Flores abortu dioici v. monoici. Perianthii tubus in flore ♂ brevissimus solidus, in flore ♀ ovario adnatus, ovoideus v. oblongus; lobi 5 v. 6, usque ad discum soluti, valvati, intus pone stamina v. medio sæpius fasciculo pilorum instructi. Stamina 5 v. 6, basi loborum affixa, filamentis brevibus; antheræ parvæ, loculis rima obliqua 2-valvibus, mox fere explanatis; in flore ♀ staminodia parva v. 0. Discus leviter concavus v. convexus, ultra ovarium non extensus. Ovarium inferum; stylus vix ullus, stigmate subsessili 2-3-lobo; ovula 2–3, ab apice placentæ crassiusculæ centralis (v. interdum hinc parieti adnatæ?) pendula. Drupa ovoidea v. subglobosa, exocarpio carnosulo, endocarpio osseo, extus rugoso, intus in laminas duras intra costas seminis intrusas producto. Semen sulcis longitudinalibus profundis in costas valde prominentes divisus, sectione transversa stellato-6–8-loba; embryo in centro albuminis breviter linearis, radicula cotyledonibus multo longiore.—Frutices sæpe (nec semper?) in arbores more *Loranthacearum* parasitici. Folia alterna, petiolata, sæpius crassiuscula. Flores ♂ minimi, ad axillas cymuloso-fasciculati, v. in pedicellis capitellati; ♀ majores, pauciores v. solitarii, sæpius sessiles.

Species enumeratæ 12, Indiæ Orientalis, Archipelagi Malayani et Chinæ incolæ, inter se tamen sæpe valde affines et nonnullæ forsan reducendæ. *A. DC. Prod.* xiv. 630. *H. philippinensis*, A. DC., a Cumingio in Malacca nec in ins. Philippinarum lecta fuit. *H. fruticosa*, Champ., e Hong-kong, certe ab *H. heterantha*, Hook. f., inflorescentia aliisque notis bene distincta est.

20. **Scleropyrum**, *Arn. in Mag. Zool. and Bot.* ii. 549.—Flores abortu subdioici, fertiles sæpe hermaphroditi. Perianthii tubus in flore ♂ brevis solidus, in flore fertili ovoideus, ovario adnatus; lobi 5, usque ad discum soluti, valvati v. leviter imbricati, uno exteriore. Stamina 4, ad basin loborum affixa iisque breviora, filamentis brevibus 2-fidis; antherarum loculi in ramis separata, singuli 2-valves fere 2-locellati. Discus annularis, margine undulatus. Ovarium inferum; stylus brevis, crassiusculus, stigmate lato peltato margine dentato; ovula 3, ab apice placentæ liberæ v. uno latere parieti adnatæ pendula. Drupa obovoideo-pyriformis, in pedicellum contracta, perianthii reliquiis diu coronata, exocarpio carnoso crasso, endocarpio duro tenuiore. Semen subglobosum; embryo teres, in centro albuminis carnosi.—Arbores glabræ v. inflorescentia pubescente, spinis brevibus ad nodos defoliatos (pedunculis abortivis?) sæpe armatæ. Folia alterna, breviter petiolata, integerrima, coriacea, pennivenia. Spicæ breves, laxiusculæ, fere amentiformes, aphyllæ, ad nodos defoliatos ramorum annotinorum v. vetustiorum solitariæ v. geminæ.

Species nobis notæ 2, Indiæ orientalis incolæ, ab A. DC. in Prod. xiv. 629 ad *Pyrulariam* relatæ. Una e Zeylania et Peninsula. *Wight, Ic. Pl. t.* 241; *Bedd. Fl. Sylv. t.* 304, includit *P. Wallichianam*, et *P. ceylanicam*, A. DC., altera Malayana (*Maingay*) est verisimiliter *P. moschifera*, A. DC., et forte eandem legit Johnson in Cochinchina. In hac perianthii lobi omnes valvati videntur, in *S. Wallichiano* certe plus minus imbricati ut jam indicavit Beddome, uno semper exteriore.

Genus nostro sensu habitu, inflorescentia, staminibus, disco, etc., bene a *Pyrularia* distinguitur.

21. **Choretrum**, *R. Br. Prod.* 354.—Flores hermaphroditi. Perianthii tubus ovario

adnatus, turbinatus, supra ovarium brevissime productus extusque ad apicem ovarii margine prominulo sæpe cinctus, lobi 4 v. 5, usque ad discum soluti, valvati, apice inflexi v. incrassati. Stamina 4–5, prope basin loborum affixa, filamentis brevissimis; antheræ terminales, loculis divaricatis confluentibus, in valvas 4 aperiendæ, explanatæ. Discus subplanus, perianthii tubi partem liberam brevissimam vestiens, margine truncatus v. sinuato-4–5-lobus. Ovarium inferum; stylus brevissimus, stigmate integro v. leviter 2-lobo; ovula 2? ab apice placentæ brevissimæ centralis pendula. Drupa parva, ovoidea v. globosa, perianthii lobis persistentibus coronata, exocarpio succulento, endocarpio crassiusculo duro.—Frutices ramulis numerosis v. rigidis aphyllis, foliis nempe omnibus ad squamas minutas deciduas reductis. Flores minuti, secus ramulos solitarii v. fasciculati, bracteis minutis squamiformibus 2–4 involucrati.

Species 4, Australianæ. *Benth. Fl. Austral.* vi. 218. *Endl. Iconogr. t.* 45.

Ovula in ovario minuto difficillime observata, et vix ante fecundationem distincta.

22. **Leptomeria**, *R. Br. Prod.* 353.—Flores hermaphroditi. Perianthii tubus ovario adnatus, sæpius angustus, vix ultra ovarium productus, nec extus marginatus; lobi 5, rarius 4, usque ad discum soluti, valvati, apice subinflati v. crassiusculi. Stamina 5, rarius 4, prope basin loborum affixa, filamentis brevissimis; antheræ terminales, loculis divaricatis confluentibus, in valvas 4 aperiendæ v. in discum subintegrum medio prominulum explanatæ. Discus epigynus subplanus, plus minus distinctus. Ovarium inferum; stylus brevissimus, stigmate integro v. vix lobato; ovula 2 (v. 3?) sub apice placentæ centralis affixa, pendula. Drupa parva, ovoidea v. globosa, perianthii lobis persistentibus coronata, exocarpio carnoso v. subsicco, endocarpio crustaceo. Semen ovoideum; embryo in albumine carnoso minimus.—Frutices ramis numerosis tenuibus v. rigidis subaphyllis, foliis nempe ad squamas alternas minutas sæpius deciduas reductis, v. rarius paullo longioribus lineari-teretibus. Flores minuti, in racemulos v. spiculas terminales lateralesve dispositi, singuli sessiles v. pedicellati, in axilla bracteæ minute squamiformis v. rarius longioris foliaceæ.

Species 14, Australianæ. *Benth. Fl. Austral.* vi. 220. *Labill. Pl. Nov. Holl.* i. *t.* 93 (*Thesium*). *Endl. Iconogr. t.* 74.

Genus ab Endlichero in sectiones 2 dividitur: 1. *Xeromeria*, bracteis sub floribus minutis caducissimis nec sæpius nisi in spicula nascente conspicuis. 2. *Oxymeria*, bracteis sub floribus persistentibus, minimis v. flores superantibus.

23. **Phacellaria**, *Benth. gen. nov.*—Flores monoici, secus ramos sparsi, sessiles. Perianthii tubus in fl. ♂ brevis solidus, in fl. ♀ ovario adnatus ovoideus; lobi 4 v. 5, usque ad discum soluti, breves, valvati. Stamina 4 v. 5, basi loborum affixa, filamentis brevissimis crassis; antheræ terminales, loculis distinctis divergentibus longitudinaliter dehiscentibus. Discus subplanus, inter stamina v. inter lobos perianthii angulatus. Ovarium inferum; stylus brevissimus, crassiusculus, stigmate breviter 3-lobo v. subintegro; placenta centralis brevis, crasso-conica, ovulis 3 ab apice pendulis appressis. Fructus junior ovoideo-oblongus, perianthii lobis persistentibus coronatus, pericarpio carnoso; maturus nobis deest.—Fruticuli in arboribus v. in *Loranthis* parasitici, caulibus fasciculatis brevibus (3–5-pollicaribus) aphyllis. Flores minimi, secus ramos sparsi, solitarii v. fasciculati, sessiles v. foveolis rami leviter immersi. Bracteæ 0.

Species 2, in Birma v. in Malacca crescentes: 1. *P. rigidula*, Benth., caulibus teretibus rigidulis (ad ½ lin. diam.) ramosis. Birma v. Malacca, *Griffith, Kew Distrib. n.* 2745. 2. *P. compressa*, Benth., caulibus crassiusculis plano-compressis (1–1½ lin. latis) simplicibus. Moulmeyn, *C. Parish.* Flores in his speciminibus minus perfecti quam in Griffithianis, sed species stricte congener videtur.

24. **Myzodendron**, *Banks et Sol.*; *DC. Prod.* iv. 285; *Mem. Loranth. t.* 11, 12 (*errore* Misodendron).—Flores dioici. Perianthium in flore ♂ 0. Stamina 2–4, circa discum parvum glanduliformem affixa, filamentis crassiuscule filiformibus; antheræ terminales, erectæ, ovoideæ v. globosæ, uniloculares, vertice 2-valvatim dehiscentes. Perianthium floris ♀ ovario adnatum, margine supra ovarium libero brevissimo, extus angulis 3 longi-

tudinalibus interdum in alam dilatatis et inter angulos rimis totidem setam unicam pluresve foventibus instructum. Staminodia 0. Ovarium inferum, disco vix conspicuo coronatum; stylus brevis, crassus, stigmatibus 3 brevibus; ovula 3, ab apice placentæ centralis crassiusculæ pendula. Fructus parvus, nuceus v. utriculosus, extus setis lateralibus valde elongatis plumosis instructus v. rarius nudus. Semen conforme; embryo in centro albuminis carnosi teres, radicula supera crassa ex albumine prominula cotyledonibus minimis v. vix distinctis multo longiore.—Suffrutices ramosissimi, in arboribus parasitici. Folia alterna parva v. 0. Flores minuti, secus ramos alterni ebracteati v. in spiculas parvas amentiformes dispositi.

Species 4, Chili australis et terræ Magellanicæ incolæ. *Hook. f. Fl. Ant.* ii. 289, *t.* 102 *ad* 107 *ter*. *Pœpp. et Endl. Nov. Gen. et Sp. t.* 1 *ad* 3. *Deless. Ic. Sel.* iii. *t.* 80.

De ligni structura aliisque notis anatomicis et physiologicis, confer Hook. f. l.c., ubi sectiones 2 distinguuntur: 1. *Gymnophyton*, ramis sæpius articulatis aphyllis, spiculis minimis amentiformibus, bracteis imbricatis flores singulos foventibus, masculis 2-andris. 2. *Eumyzodendron*, ramis foliatis continuis, floribus axillaribus solitariis v. 2–3-nis, masculis 3–4-andris. Flores superiores interdum spicam seu racemum terminalem formant foliis floralibus ad bracteas reductis. Genus habitu et embryonis radicula ad apicem albuminis prominula *Loranthaceis* accedit, ovarium cæterique characteres tamen potius *Santalacearum*.

Tribus III. Anthoboleæ.

25. **Anthobolus**, *R. Br. Prod.* 357.—Flores abortu dioici. Perianthium usque ad discum divisum in segmenta 4, rarius 3 v. 5, valvata, apice concava v. inflexa. Stamina 4, rarius 3 v. 5, filamentis brevissimis; antheræ ovatæ, loculis distinctis parallelis demum lateraliter rima longitudinali dehiscentibus. Discus planus, inter stamina sinuato-lobatus. Ovarium superum, basi disco leviter immersum, carnosum; stigma sessile, pulvinatum, obscure sulcatum; ovulum, ut videtur, in centro loculi erectum. Drupa ovoidea v. oblonga, pedicello incrassato carnoso insidens, omnino supera, exocarpio succulento haud crasso, endocarpio crustaceo v. duriusculo. Semen erectum; embryo in apice albuminis carnosi parvus, subteres, radicula supera cotyledonibus minimis longiore.—Frutices glabri, ramis tenuibus rigidisve. Folia alterna, lineari-teretia et persistentia, v. ad squamas minutas deciduas reducta. Flores minimi, pedicellati, ♂ sæpius 3–5-ni, ♀ 1–2 in pedunculo brevi axillari. Bracteolæ minutæ, caducissimæ.

Species 3 v. 4, Australianæ. *Benth. Fl. Austral.* vi. 226. *Hook. Ic. Pl. t.* 1173.

26. **Exocarpus**, *Labill. Voy.* i. 155, *t.* 14. (Sarcocalyx, *Zipp. in Bull. Feruss.* xviii. 92, *ex A. DC.* Xynophylla, *Montrous. in Mém. Acad. Sc. Lyons* x. 250 *ex descr.*)—Flores hermaphroditi v. abortu masculi. Perianthium usque ad discum divisum in segmenta 5 rarius 4, valvata, apice leviter concava. Stamina 5 rarius 4, prope basin segmentorum affixa, filamentis brevissimis latis; antherarum loculi distincti, adnati, introrsum subparalleli v. divergentes marginalesque, longitudinaliter dehiscentes. Discus planus, crassiusculus, sinuato-5–4-lobus. Ovarium superum, disco semi-immersum, carnosulum, subconicum; stigma in vertice ovarii sessile, parvum, sub-2-lobum; ovulum, ut videtur, in centro loculi erectum. Fructus nuceus v. drupaceus, pedicello incrassato carnoso insidens, omnino superus, exocarpio tenui sicco v. carnosulo, endocarpio crustaceo v. indurato. Semen erectum; embryo in apice albuminis carnosi parvus subteres, radicula supera cotyledonibus minimis longiore.—Arbores fruticesve. Folia alterna v. rarius opposita, sæpius caducissima v. omnia ad squamas minutas reducta, ramulis floriferis sæpissime aphyllis, v. rarius folia omnia v. ramorum sterilium bene evoluta et persistentia. Flores minuti, in spiculas v. fasciculos ad axillas sessiles dispositi, singuli sessiles v. subsessiles, dente rhacheos v. bractea minuta squamiformi subtensi, uno rarius 2 v. 3 cujusve spiculæ fertili, pedicello mox accreto incrassatoque fulto, cæteris mox abortientibus deciduis.

Species ad 12, pro maxima parte Australianæ, quarum una per Archipelagum Malayanum late dispersa, adsunt etiam singulæ in Novo-Zelandia, ins. Norfolk, ins. Sandwicensibus et ut videtur in

Madagascaria. *A. DC. Prod.* xiv. 688. *Benth. Fl. Austral.* vi. 228. *Baill. Adans.* iii. 109. *Blume, Mus. Bot.* i. *t.* 37. *Hook. f. Fl. Nov. Zel. t.* 52, *ic. in Schnizl. Iconogr. t.* 108*** *repetita.*

Ovulum ex ic. Blumei mediante funiculo ab apice loculi suspensum quod ex observationibus sequentibus non confirmatur, ab aliis ex apice placentæ centralis adnatæ pendulum dicitur, in speciminibus siccis examinatis a basi erectum apparet.

27. **Champereia,** *Griff. in Calc. Journ. Nat. Hist.* iv. 237. (Malulucban, *Blanc. Fl. Filip.* 188, *ed.* 2, 133. Opiliæ *sect.* Opiliastrum, *Baill. Adans.* iii. 123.)—Flores hermaphroditi (interdum abortu masculi?). Perianthium usque ad discum divisum in segmenta 5, valvata. Stamina 5, filamentis filiformibus brevissimis v. demum perianthio subæquilongis; antheræ ovatæ v. oblongæ, loculis parallelis longitudinaliter dehiscentibus. Discus subplanus, margine breviter inter stamina 5-lobus. Ovarium superum, in disco semiimmersum; stigma sessile, latiusculum, pulvinatum; ovulum, ut videtur, in centro loculi erectum. Drupa ovoideo-oblonga, pedicello haud incrassato fulta, omnino supera, exocarpio tenui; endocarpium crustaceum. Semen conforme; embryo in centro albuminis oleoso-carnosi rectus, subteres, radicula supera clavata cotyledonibus angustis longiore. — Frutices interdum arborescentes, glabri. Folia alterna, breviter petiolata, plana, demum fere coriacea. Flores minimi, cymulis 3–5-floris pedicellatis in paniculas graciles ramosas axillares dispositis, sub fructu tamen inflorescentia sæpe subsimplex videtur. Bracteæ minutæ v. 0.

Species v. varietates inter se quam maxime affines 2, Malaccæ et Archipelagi Malayani (Javæ, ins. Philippinensium, *Cuming, n.* 1129, etc.) incolæ. *Kurz, For. Fl. Burm.* ii. 330.

Genus, ut jam monuit Griffith, *Exocarpum* cum *Opilieis* (supra i. 349) arcte connectens. Planta ex Indiæ Orientalis Peninsula, a Baillono Adans. iii. 125, generice separata sub nomine *Champereiæ Perrottetianæ*, nobis ignota est, ex charactere dato a genere Griffithiano pluribus notis recedit.

TRIBUS IV. GRUBBIEÆ (V. GENUS ANOMALUM).

28. **Grubbia,** *Berg. Pl. Cap.* 90, *t.* 2. (Ophira, *Linn. Mant. n.* 1304.)—Flores hermaphroditi, ternatim sessiles, ternationibus axillaribus dissitis v. in strobilum axillarem confertis. Perianthii tubus brevis, ovario adnatus; limbi segmenta 4, lata, valvata, dorso dense pilosa. Stamina 8, quorum 4 ad basin loborum, 4 iis alterna et parum breviora, filamentis crassiusculis inflexis; antheræ parvæ, loculis demum lateraliter dehiscentibus. Discus pilosus, parum prominulus. Ovarium inferum; stylus breviter filiformis, stigmate emarginato v. breviter 2-fido; ovula 2, a placenta libera v. parieti plus minus adnata pendula. Fructus cujusve axillæ plus minus connati uno solo sæpius perfecto, exocarpiis carnosulis connatis, endocarpio fructus perfecti duro sæpius osseo. Semen ovoideum; embryo in centro albuminis linearis, subteres, radicula cotyledonibus multo longiore.— Frutices ericoidei. Folia opposita, angusta, integerrima, margine revoluta. Flores parvi, in utraque axilla cujusve paris foliorum v. bractearum ternati, ternationibus oppositis verticillastra 6-flora constituentibus.

Species 2, Africæ australis incolæ, inflorescentia distinctissimæ, in sectiones v. genera 2 ab auctoribus separatæ. *A. DC. Prod.* xiv. 618. In specie typica, *Ophira*, Linn., flores in verticillastris axillaribus dissitis dispositi, pilis perianthiorum albis insignes, cujusve axillæ in capitula distincta 3-flora bracteis 2 latis glabris stipata conferti. In *G. stricta*, DC. (OPHIRA, *Lam. Illustr. t.* 293; STROBILOCARPOS, *Klotzsch in Linnæa* xiii. 380), ramuli floridi ad capitulum parvum globosum v. ovoideum strobiliformem in axillis foliorum subsessile reducti, verticillastris in strobilo 3–6 arcte confertis, ut in *Ophira* typica 6-floris sed folia floralia ad bracteas flores non superantes reductæ et post anthesin fructus omnes strobili in syncarpium connati, pauci tantum in strobilo perfecti.

Ordo CL. BALANOPHOREÆ.

Endl. Gen. Pl. 72. Hook. f. in Trans. Linn. Soc. xxii. 1. Balanophoraceæ, Lindl. Veg. Kingd. 89. Eichler in DC. Prod. xvii. 117.

Flores unisexuales, rarissime hermaphroditi, in inflorescentias (*spadices* dictas), simplices rarissime ramosas unisexuales v. androgynas densissime conferti. Fl. ♂ nudi, v. perianthio 3–8-lobo lobis valvatis instructi. *Stamina* in floribus achlamydeis solitaria v. 2-na, in floribus perianthio instructis sæpissime lobis ejus opposita, rarissime 1 v. 2; filamenta libera v. in tubum v. columnam connata. *Antheræ* in floribus achlamydeis basi v. dorso affixæ, normales, 2-loculares, rimis lateralibus v. anticis dehiscentes, in cæteris basifixæ, liberæ v. in capitulum connatæ, 2-loculares v. 4–∞-locellatæ, loculis locellisve poris rimisve anticis posticis terminalibusve dehiscentibus v. irregulariter ruptis; pollen globoso-trigonum, rarius ellipsoideum. Fl. ♀: *Perianthium* 0, v. ovario arcte adnatum, limbo parvo supero truncato 2-labiato v. tubuloso, rarius e segmentis lineari-clavatis subulatisve ovario adnatis. *Ovarium* globosum v. ellipsoideum et compressum, v. prismatico-obovoideum, 1–3-loculare, loculis parvis. *Styli* terminales; v. 1 filiformis v. subclavatus, v. 2 breves v. elongati, stigmatibus simplicibus v. capitellatis, rarissime stigma sessile discoideum. *Ovula* in loculis solitaria, sæpissime pendula, nuda v. integumento unico instructa v. ad sacculum embryonalem reducta, anatropa, semianatropa v. atropa, funiculo brevissimo v. 0. *Fructus* parvus, ovario conformis sed paullo major, nuceus, omnino crustaceus v. extus carnosulus v. coriaceus, 1-locularis loculo minuto, 1-spermus. *Semen* loculum implens, globosum v. compressum, rarius oblongum; testa tenuissima v. 0, rarissime crassiuscula. *Albumen* densum, oleosum, rarius amylaceum. *Embryo* microscopicus, apicem versus seminis situs v. subcentralis, rarissime lateralis, pyriformis clavatus v. subglobosus, indivisus.

Herbæ carnosæ, radicibus parasiticæ, fuscæ flavæ rubræ v. rarius subviolaceæ, perennes v. monocarpicæ, stomatibus et chlorophyllo destitutæ, parenchymate amylifero v. cerifero sclerogyne sæpe farcto. Rhizomata tuberosa, simplicia v lobata, interdum ramos cylindraceos glabros v. tomentosos emittentia, nuda v. squamosa, epi- v. hypo-gæa, ad basin pedunculorum sæpe in volvam brevem v. elongatam coriaceo-carnosam lobatam desinentia. Pedunculi breves v. elongati, cylindracei, nudi v. annulo cincti v. rariter squamis deciduis v. persistentibus instructi. Spadices ovoidei clavati cylindracei globosi v. fusiformes, simplices v. processibus mammilliformibus floriferis elongatis v. deplanatis onusti, in uno genere ramosi, in altero ad apicem pedunculi fasciculati. Bracteæ spadicis 0 v. numerosæ; nunc unguiculatæ ovatæ et imbricatæ, nunc stipitatæ hexagono-pyramidatæ et valvatim cohærentes, deciduæ; in *Mystropetalo* solo flores modo normali bracteati et 2-bracteolati. Flores parvi v. ♀ præsertim minuti et stratum continuum non raro pilis articulatis densissime confertis immixti formantes; ♂ sæpius multo majores, nunc fœmineis intermixti, nunc in parte inferiore v. superiore spadicis numerosiores.

Species ad 35, pleræque sylvis primævis humidis montium et convallium tropicarum obviæ, paucæ austro-Africanæ, una Mediterranea, altera Novo-Zelandica.

Formæ abnormes indicantur in characteribus nostris tribuum, quarum plures monotypicæ v. e generibus perpaucis constantes inter se longe differunt.

Ordo habitu naturalis, sed quoad flores utriusque sexus et fructum polymorphus, *Halorageis* evidenter affinis, nam *Cynomorium Hippuridi* accedit et *Lophophytum Gunneræ*, denique indole ovarii et ovulorum *Helosideæ* et *Lophophyteæ Santalaceas* affinesque in mentem revocant. Auctorum sententiæ valde differunt quoad florum fœmineorum compositionem in *Langsdorffieis*, *Helosideis* et *Lophophyteis*, ubi ex Hofmeistero et Eichlero constant ex ovario nudo appendicibus coronato. Hæ appendices tamen ab omnibus auctoribus prioribus pro limbo supero perianthii adnati habitæ sunt. Hujus quæstionis solutio quærenda est in observatione floris fœminei incrementi. Styli evolutio, ea appendicium serior, nobis indicare videtur harum originem veram ex perianthio. Ovarii et ovuli structura in plerisque generibus longe difficilius explanatur, et sub

quoque genere indicamus quæ sequuntur ex investigationibus eximiis Hofmeisteri et Eichleri, non tamen semper sententiis suis stamus, ex quibus interdum stirpes, aliunde quam maxime inter se affines (e.g. *Scybalium* et *Helosis*), magnopere differre dicantur structura et insertione ovuli et seminis.

CONSPECTUS GENERUM.

Series A. MONOSTYLI. Stylus 1 v. 0.

a. Stamen 1 *v. stamina* 2–4 *inter se libera.*

Tribus I. Cynomorieæ. Flores polygami, perianthio instructi. Stamen 1, in fl. ☿ epigynum, anthera 2-loculari. Ovulum 1, pendulum.

1. CYNOMORIUM.—*Reg. Mediterr., As. centr.*

Tribus II. Sarcophyteæ. Flores dioici rarius monoici. Perianthium fl. ♂ 3–4-lobum; fl. ♀ 0. Stamina 3, antheris multilocellatis. Stylus 0. Ovula 3, pendula.

2. SARCOPHYTE.—*Afric. Aust.*

Tribus III. Mystropetaleæ. Flores monoici. Perianthium fl. ♂ 2-labiatum, 3-lobum; fl. ♀ pigynum, subcampanulatum. Stamina 2–3, antheris 2-locularibus. Ovula 3, pendula.

3. MYSTROPETALUM.—*Afric. Aust.*

Tribus IV. Dactylantheæ. Flores monoici? Perianthium fl. ♂ 0; fl. ♀ e processibus subulatis 2–3. Stamina 1 v. 2, antheris 2-locularibus. Ovula ignota.

4. DACTYLANTHUS.—*Nov. Zel.*

b. Stamina lobis perianthii opposita, in columnam connata.

Tribus V. Eubalanophoreæ. Flores monoici v. dioici. Perianthium fl. ♂ 2–6-lobum; fl. ♀ 0. Stamina 3–∞, antheris 2-locularibus v. 4–∞-locellatis. Ovulum 1, pendulum.

5. BALANOPHORA.—*Asia et Austral. trop. et subtrop., Archip. Malay., Nov. Hebrides.*

Tribus VI. Langsdorffieæ. Flores dioici v. monoici. Perianthium fl. ♂ 3-lobum v. e squamis 2–3; fl. ♀ tubulosum. Antheræ 2-loculares. Ovulum 1.

6. LANGSDORFFIA. Perianthium fl. ♂ 3-lobum, lobis valvatis; flores ♀ connati.—*Amer. trop.*

7. THONNINGIA. Perianthii fl. ♂ squamæ columnæ stamineæ adnatæ; flores ♀ inter se liberi. —*Afric. trop.*

Series B. DISTYLI. Styli 2.

Tribus VII. Helosideæ. Perianthium fl. ♂ 3-lobum v. integrum; fl. ♀ ovario adnatum limbo breviter 2-labiato. Stamina 3, in columnam connata.

* *Perianthium fl. ♂ 3-lobum.*

8. SCYBALIUM. Pedunculi squamati. Bracteæ spadicis imbricatæ.—*Amer. trop.*

9. HELOSIS. Pedunculi nudi. Bracteæ spadicis pyramidatæ valvatim cohærentes.—*Amer. trop.*

** *Perianthium fl. ♂ subcampanulatum v. tubulosum.*

10. CORYNÆA. Antherarum capitulum 6-locellatum.—*Amer. trop.*

11. RHOPALOCNEMIS. Antherarum capitulum multilocellatum.—*Himal. or., Java.*

Tribus VIII. Lophophyteæ. Perianthium fl. ♂ 0; fl. ♀ ovario adnatum, limbo truncato. Stamina 2, antheris 2-locularibus.

12 LOPHOPHYTUM. Volva 0. Flores utriusque sexus processibus spadicis mammilliformibus bracteis suffultis inserti.—*Amer. trop.*

13. OMBROPHYTUM. Volva evoluta. Flores utriusque sexus stipitibus squamarum peltatarum insertis.—*Peruvia.*

14. LATHROPHYTUM. Volva evoluta. Flores ♂ in parte superiore spadicis sessiles dense verticillati, ♀ ut in *Ombrophyto*.—*Brasil.*

TRIBUS I. CYNOMORIEÆ.

1. **Cynomorium**, *Linn. Gen. n.* 922. Spadices unisexuales. Flores polygami. Perianthii segmenta 4–6, rarius 1–3 v. 7–8, lineari-clavata, in fl. ☿ et ♀ rarius, in fl. ♂ sæpius subregulariter verticillata, in fl. ☿ et ♂ basi v. lateribus ovarii adnata v. fere epigyna, fructu persistentia. Stamen 1, posticum, in fl. ♂ basi perianthii insertum, in fl. ☿ epigynum stylo antepositum, filamento crassiusculo filiformi; anthera dorsifixa, versatilis, 2-locularis, loculis 2-locellatis rimis anticis dehiscentibus; pollen globosum, 3-verrucosum. Ovarium oblique globoso-ovoideum, stipitatum, 1-loculare, in fl. ♂ ad stylum rudimentarium reductum; stylus terminalis, elongatus, sursum sensim incrassatus, antice canaliculatus, stigmate obtuso v. truncato; ovulum ab apice loculi pendulum, parietibus ovarii non adhærens, hemitropum, integumento unico, micropyle obliqua deorsum spectante. Fructus nuceus, stylo perianthioque marcescente auctus, ovoideo-globosus, pericarpio coriaceo semini adhærente. Semen globosum, testa crassiuscula, albumine subcarneo oleoso; embryo minimus, pyriformis, indivisus, radicula micropylem spectante.—Herba carnosa, fusco-rubra v. purpurea, amyligera; rhizoma primum subglobosum, demum elongatum cylindraceum ramosum, pilis assugantibus vestitum, ramis ascendentibus in pedunculos spadiciferos abeuntibus, volva 0. Pedunculi crassi, squamis laxis v. imbricatis deciduis tecti. Spadices cylindracei v. clavati, e mammillis floriferis deplanatis basi bracteatis constantes; bracteæ breviter stipitatæ, lamina late triangularis basi deorsum producta, primum imbricatæ demum deciduæ. Flores plerique ♀, cum ♂ et ☿ immixti, in cymulas irregulares abbreviatas paucifloras conferti.

Species 1, regionis Mediterraneæ ab ins. Canariensibus ad Syriam et Asiæ centralis incola. *Eichler in DC. Prod.* xvii. 122. *Rich. in Mém. Mus. Par.* viii. *t.* 21. *Hook f. in Trans. Linn. Soc.* xxii. *t.* 1 A. *Weddell in Arch. Mus. Par.* x. *t.* 24 *ad* 27, *et in Ann. Sc. Nat. ser.* 3, xiv. *t.* 11, *f.* 43 *ad* 47. *Hofmeist. in Pringsh. Jahrb.* i. *t.* 10, *f.* 1 *ad* 5, *et in Neue Beitrag. Embryobild.* i. *t.* 11. Stamina rarissime 2 a Parlatoreo (in Fl. Ital. iv. 382) descripta.

TRIBUS II. SARCOPHYTEÆ.

2. **Sarcophyte**, *Sparrm. in K. Vet. Akad. Handl. Stockh.* xxvii. 300, *t.* 7. (Ichthyosma, *Schlecht. in Linnæa* ii. 671, *t.* 8, iii. 194.) Spadices unisexuales. Flores dioici. Fl. ♂: Perianthium tubo brevi solido; lobi 3–4, ovati, concavi, valvati. Stamina 3 v. 4, basi loborum perianthii inserta, filamentis brevibus cylindraceis; antheræ basifixæ, globosæ, multilocellatæ, locellis periphericis apice ruptis demum confluentibus; pollen globosum, 3-porosum. Ovarii rudimenta 0. Fl. ♀ plus minusve in capitula connati. Ovarium ovoideum, 3-loculare; stigma sessile, discoideum; ovula 3, ab apice placentæ centralis primum liberæ pendula, ad saccos embryonales reducta, anatropa. Fructus, syncarpium carnosulum, endocarpiis induratis obtuse 3-gonis 1-locularibus 1-spermis. Semen subglobosum, integumento 0, albumine carnoso oleoso; embryo centralis, globosus.—Herba crassa, carnosa, sanguinea, glaberrima, amyligera, odore ingrato; rhizoma amorphum, lobatum, esquamatum, circa pedunculi basin in volvam brevem irregulariter lobatam productum. Pedunculi breves, crassi, squamis persistentibus instructi. Spadices ampli, pyramidati, paniculatim ramosi; bracteæ ad basin ramorum primariorum persistentes. Flores ♂ ramis spadicis solitarii; ♀ in capitula subglobosa subsessilia concreti. Fructus sæpissime cassi, putamine osseo.

Species 1, Africæ australis incola. *Eichler in DC. Prod.* xvii. 126, *et in Act. Congr. Bot. Par.* 1867, *t.* 2, *f.* 21, 22. *Griff. in Trans. Linn. Soc.* xix. *t.* 38. *Hook. f. ibid.* xxii. *t.* 1 c. *Tratt. Thes. Bot. t.* 90. *Wedd. in Ann. Sc. Nat. ser.* 3, xiv. *t.* 10, *f.* 34 *ad* 48. *Hofmeist. Neue Beitrag. Embryobild.* i. *t.* 13. Ovarii loculi et ovula ex Eichlero.

TRIBUS III. MYSTROPETALEÆ.

3. **Mystropetalon**, *Harv. in Ann. Nat. Hist. ser.* 1, ii. 385, *t.* 19, 20. (Blepharochlamys, *Presl, Epim. Bot.* 245.)– Spadices androgyni. Flores monoici. Fl. ♂: Perianthium

2-labiatum, 3-partitum; segmenta spathulata, concava, unguiculata, antico paullo minore, valvata. Stamina unguibus segmentorum perianthii inserta, 2 fertilia, tertium, segmento antico insertum, rudimentarium v. 0, filamentis filiformibus; antheræ conniventes, dorsifixæ, versatiles, 2-loculares, loculis 2-locellatis extrorsum dehiscentibus; pollen cubicum, granulatum. Fl. ♀ disco cupulari inserti. Perianthium superum, tubulosum v. urceolatum, 3-lobum, deciduum. Staminum rudimenta 2, minima, v. 0. Ovarium ovoideum, puberulum, 3-loculare; stylus filiformis, terminalis, deciduus, stigmate obscure 3-lobo; ovula in loculis solitaria, elongata, pendula, ad saccos embryonales reducta, anatropa? Fructus subglobosus, nuceus, pericarpio carnosulo intus crustaceo, 1-spermus. Semen globosum, integumento 0, albumine grumoso oleoso; embryo minutus, apicalis, pyriformis, indivisus, radicula supera.—Herbæ carnosæ, amyligeræ; rhizoma ignotum. Pedunculi squamis sparsis lineari-lanceolatis tecti. Spadices oblongi. Flores sessiles, conferti, bracteati et 2-bracteolati, ♂ in spadicibus terminales.

Species 2, Africæ australis incola. *Hook. f. in Trans. Linn. Soc.* xxii. *t.* 1 B. *Eichler in DC. Prod.* xvii. 124, *et in Act. Congr. Bot. Par.* 1867, *t.* 1, *f.* 10. Descriptio ovulorum ex Eichlero.

TRIBUS IV. DACTYLANTHEÆ.

4. **Dactylanthus,** *Hook. f. in Trans. Linn. Soc.* xxii. 425, *t.* 75.—Spadices unisexuales, conferti. Flores dioici. Fl. ♂: Perianthium 0. Stamina 1–2, filamentis brevissimis; antheræ dorso basi affixæ, didymæ, 2-loculares, loculis rimis lateralibus dehiscentibus; pollen subgloboso-trigonum. Fl. ♀: Perianthium ovario adnatum, in processus 2–3 angustos erectos epigynos productum. Ovarium stipitatum, ovoideo-oblongum, utrinque attenuatum; stylus terminalis, filiformis, stigmate obtuso; ovula . . . Fructus . . .—Herba carnosa, glaberrima, ferruginea, intus rubra; rhizoma lobatum, tuberculatum, esquamatum; volva 0. Pedunculi conferti, squamis imbricatis ovato-oblongis obtusis tecti; squamæ superiores majores, oblongæ, involucrum spadicem superans efformantes. Spadices ad apicem pedunculi numerosi, graciles, erecti, cylindracei, basi nudi v. floribus imperfectis sparsis aucti; pars florifera anguste fusiformis v. cylindracea; ♂ robustiores. Flores dense conferti, ebracteati et ebracteolati.

Species 1, Novæ Zelandiæ incola. *Hook. f. Handb. N. Zeal. Fl.* 255. Genus defectu exemplarium imperfecte cognitum.

TRIBUS V. EUBALANOPHOREÆ.

5. **Balanophora,** *Forst. Char. Gen. t.* 50. (Cynopsole, *Endl. Gen.* 74. Sarcocordylis, *Wall. Cat. Herb. Ind. n.* 7249, *nomen tantum.*)—Spadices unisexuales v. androgyni. Flores monoici v. dioici. Fl. ♂: Perianthii tubus cylindraceus, solidus; lobi 3–6, ovati, concavi, valvati. Stamina 3–∞, filamentis 0, v. in columnam solidam cylindraceam connatis; antheræ connatæ, v. inter se distinctæ et 2-loculares loculis 2-locellatis, v. in capitulum 3–∞-locellatum omnino confluentes, loculis locellisve extrorsum longitudinaliter v. rarius transversim dehiscentibus; pollen subtrigono-globosum, læve v. pustulatum. Ovarii rudimenta 0. Fl. ♀: Perianthium 0. Ovarium ellipsoideum, compressum, 1-loculare, utrinque angustatum v. basi stipitatum, apice in stylum gracilem persistentem attenuatum, stigmate terminali; ovulum 1, ab apice loculi pendulum, integumento 0, anatropum. Fructus nuceus, pericarpio crustaceo semini adhærente. Semen globosum, albumine copioso oleoso; embryo minimus, subglobosus, e cellulis 2–3 constans.—Herbæ carnosæ, glabræ, rubræ flavæ albidæ v. fuscæ, cera scatentes; rhizoma tuberosum, simplex v. lobatum, rarius elongatum, lenticellis stellato-lobulatis conspersum, lobis ad basin pedunculorum in volvam lobatam ampliatis. Pedunculi cylindracei, graciles v. robusti, squamis persistentibus tecti, v. fere nudi et involucro annulari lobato cincti. Spadices ovoidei globosi cylindracei v. clavati. Flores corporibus cellulosis clavatis densissime confertis immixti, ♂ majusculi, in spadicibus androgynis inferiores v. inter ♀ sparsi; ♀ stratum tenue efformantes, minuti, interdum cum stipitibus corporum clavatorum sparsi v. verticillati.

Species 11, Asiæ orientalis tropicæ, Archipelagi Malayani, Australiæ tropicæ et ins. Nov. Hebridarum incolæ. *Eichl. in DC. Prod.* xvii. 143. *Griff. in Trans. Linn. Soc.* xx. *t.* 3 *ad* 7. *Royle, Ill. Pl. Himal. t.* 78 A. *Hook. f. in Trans. Linn. Soc.* xxii. *t.* 4 *ad* 8, *et t.* 75. *Hook. Ic. Pl. t.* 205, 206, (*Langsdorffia*). *Jungh. et Gœpp. in Nov. Act. Nat. Cur.* xviii. *Suppl.* i. *t.* 1–3. *Unger in Ann. Wien. Mus.* ii. *t.* 2. *Beccari in Nuov. Giorn. Bot. Ital.* i. *t.* 2 *ad* 4. *Wedd. in Ann. Sc. Nat. ser.* 3, xiv. *t.* 9. *Hofmeist. in Pringsh. Jahrb.* vi. 529, *et in Neue Beitr. Embryobild. t.* 14, 15. Embryo a nobis non visus.

TRIBUS VI. LANGSDORFFIEÆ.

6. **Langsdorffia,** *Mart. in Eschweg. Journ. v. Bras.* ii. 178, *et Nov. Gen. et Sp.* iii. 181, *t.* 298, 299.—Spadices unisexuales v. androgyni. Flores dioici, rarius monoici. Fl. ♂ : Perianthii tubus cylindraceus, solidus; lobi 3, ovati, concavi, valvati. Stamina 3, basi loborum perianthii inserta, filamentis brevissimis connatis; antheræ basifixæ, cohærentes, cordato-rotundatæ, 2-loculares, loculis 2-locellatis extrorsum dehiscentibus, rimis superne confluentibus; pollen subglobosum, 2–4-porosum. Ovarii rudimenta 0. Fl. ♀ inferne inter se confluentes, lineari-prismatici. Perianthium superum, elongato-tubulosum, apice truncato obscure lobulato. Ovarium 1-loculare; stylus filiformis, inferne perianthii tubo adnatus, longe exsertus, superne stigmatosus, deciduus; ovulum ab apice loculi pendulum, integumento destitutum, orthotropum? Fructus e strato florum confluentium, endocarpiis crustaceis. Semina ad basin strati minima, pendula, oblonga, albumine copioso oleoso; embryo axilis, subglobosus, extremitate acutiore supera.—Herba dure carnosa, flava, cerigera, squamis floribusque purpurascentibus; rhizoma deforme v. elongatum, cylindraceum et ramosum, ramis robustis tomentosis in volvas cupulares lobatas ampliatis. Pedunculi breves, dense squamosi; squamæ imbricatæ, triangulari-lanceolatæ, rigidæ, spadices involucrantes, persistentes. Spadices ♂ oblongi, ♀ hemisphærici. Flores ebracteati et ebracteolati, ♂ majusculi, processibus conicis (fl. ♀ imperfectis) immixti; ♀ stratum continuum efformantes.

Species 1, Americæ australis tropicæ incolæ. *Eichler in DC. Prod.* xvii. 140, *et in Mart. Fl. Bras.* iv. ii. *t.* 1 *ad* 3. *Rich. in Mém. Mus. Par.* viii. *t.* 19. *Hook. f. in Trans. Linn. Soc.* xxii. *t.* 2. *Wedd. in Ann. Sc. Nat. ser.* 5, xiv. *t.* 11, *f.* 48 *ad* 57. *Karst. in Nov. Act. Nat. Cur.* xxvi. ii. *t.* 63, 64. *Hofmeist. Neue Beitrag. Embryobild.* 1, *t.* 12.

7. **Thonningia,** *Vahl in Dansk. Selsk. Skrivt.* vi. 124, *t.* 6. (Conophyta, *Schum. in Isert, Reis. nach Guinea*, 283. Hæmatostrobus, *Endl. Gen. Pl.* 76, *in nota.*)—Spadices unisexuales. Flores dioici ?. Fl. ♂ : Perianthium e squamulis 2–3 minutis lineari-subulatis pedicello antherifero subclavato sparsis. Antheræ 3–(5 ?), lineari-elongatæ, in columnam pedicello continuam connatæ, apicibus demum liberis, 2-loculares, loculis 2-locellatis extrorsum dehiscentibus; pollen globoso-trigonum. Fl. ♀ : Perianthium superum, tubulosum, ore (interdum oblique) 3-lobo v. obscure 2–3-dentato. Ovarium elongatum, anguste cylindraceum, basi interdum tumidum; stylus crasse filiformis, elongatus, inferne perianthio vaginatus, superne longe exsertus, stigmate obtuso; ovula . . . Fructus ima basi perianthii spadice immersus. Semina . . .—Herba carnosa, sanguinea, cerigera ?; rhizoma cylindraceum, ramosum, hic illic nodosum, tomentosum v. glabratum, ramorum apices in volvam brevissimam ampliati. Pedunculi breves v. elongati, squamis imbricatis tecti; squamæ triangulari-ovatæ, basi pilosæ, superiores spadicem involucrantes, summis sensim brevioribus, persistentes. Spadices ♂ minores, depresso-hemisphærici; ♀ majores, hemisphærici v. globosi. Flores ebracteati v. bracteolis ad basin fl. ♂ minutis, ♀ stratum continuum efformantes.

Species 1, Africæ occidentalis tropicæ incola. *Eichler in DC. Prod.* xvii. 141. *Hook. f. in Trans. Linn. Soc.* xxii. *t.* 3.

TRIBUS VII. HELOSIDEÆ.

8. **Scybalium,** *Schott et Endl. Melet. Bot.* 3, *t.* 2.—Spadices unisexuales v. androgyni. Flores monoici v. dioici. Fl. ♂ : Perianthii tubus cylindraceus, basi intus processu conico

(ovarii rudimento?) auctus; lobi 3, ovati, concavi, valvati. Stamina 3, filamentis in tubum connatis apicibus liberis; antheræ perianthii lobis oppositæ, basifixæ, ovato-cordatæ, connatæ, loculis 2–4-locellatis apicibus ruptis dehiscentibus; pollen globoso-trigonum. Fl. ♀: Perianthium superum, e labiis 2 rotundatis v. triangularibus brevibus antero-posticis. Ovarium oblongum v. ellipsoideum, a dorso compressum, 2-loculare; styli 2, elongati, filiformes, decidui, stigmatibus capitellatis; ovula 2 ex apice placentæ centralis primum liberæ demum in septum medium dilatatæ pendula, cum septo ovariique parietibus confluentia, anatropa. Fructus nuceus, 1-locularis, 1-spermus. Semen oblongum, albumine oleoso; embryo minutissimus, subovoideus, apicalis.—Herbæ carnosæ, rubræ v. fusco-rubræ, glaberrimæ, amyligeræ; rhizoma tuberosum globosum v. deforme, simplex lobatum v. ramosum, nudum; volva 0 v. obscura. Pedunculi cylindracei v. obconici, squamis oblongis v. triangulari-ovatis acutis tecti. Spadices globosi v. depresso-hemisphærici rarius subtabuliformes; bracteis subpeltatis primum imbricatis cito deciduis tecti. Flores in mamillis deplanatis bracteis respondentibus spadicis conferti, foliis numerosissimis lineari-clavatis immixti; bracteolæ 0.

Species 4, Brasiliæ, Novæ Granadæ et ins. Jamaicæ incolæ. *Eichl. in DC. Prod.* xvii. 131, *et in Act. Congr. Bot. Par.* 1868, *t.* 2, *f.* 20, *et in Mart. Fl. Bras.* iv. ii. *t.* 7, 8. *Hofmeist. Neue Beitr. Embryobild.* i. *t.* 17, *f.* 1 *ad* 6. SPHÆRORHIZON, *Hook. f. in Trans. Linn. Soc.* xxii. 50, *t.* 10, *et* PHYLLOCORYNE, *Hook. f. l.c.* 51, *t.* 11. *Hofmeist. l.c. t.* 17, *f.* 7, 8, recte ab Eichlero ad *Scybalium* reducta. Ovula a nobis non visa.

9. **Helosis,** *Rich. in Mém. Mus. Par.* viii. 416, *t.* 20. (Lathræophila, *Leandr. Sacram. in Ann. Sc. Nat. ser.* 2, viii. 32. Caldasia, *Mutis, Sem. Nov. Granat.* 26, *ex Schott et Endl. Melet.* 11.)—Spadices androgyni. Fl. ♂: Perianthii tubus cylindraceus, basi intus processu conico (ovarii rudimento?) auctus; lobi 3, ovati, concavi, valvati. Stamina 2, filamentis in tubum connatis apicibus liberis; antheræ basifixæ, ovato-cordatæ, connatæ, loculis primum 1–4-locellatis, demum plus minusve confluentibus ab apice deorsum antice v. postice disruptis, pollen globoso-3-gonum. Fl. ♀: Perianthium superum, e labiis 2 triangularibus obtusis brevibus alabastro interdum lobatis antero-posticis. Ovarium ellipsoideum, 1-loculare; styli 2, elongati, filiformes, decidui, stigmatibus capitellatis; ovulum 1, ab apice loculi pendulum. Fructus nuceus. Semen oblongum v. subglobosum, albumine oleoso; embryo microscopicus, apicalis, subovoideus, indivisus.—Herbæ glabræ, carnosæ, fusco-rubræ, amyligeræ; rhizoma tuberosum ramos elongatos cylindraceos nudos subterraneos emittens; volva (nisi annulus pedunculi) 0. Pedunculi ramis insidentes erecti, nudi, breves v. elongati, basi v. altius oblique annulati. Spadices late ovati v. globosi, bracteis peltatis hexagonis valvatim connexis cito deciduis tecti. Flores utriusque sexus in mamillis deplanatis spadicis bracteis respondentibus conferti, pilis numerosissimis lineari-clavatis immixti; bracteolæ 0.

Species 3 (an unius varietates?), Americæ tropicæ incolæ. *Eichl. in DC. Prod.* xvii. 134; *Act. Congr. Bot. Par.* 1868, *t.* 1, *f.* 5, 6, *et t.* 2, *f.* 23 *ad* 27, *et in Mart. Fl. Bras.* iv. ii. *t.* 4, 5, 6. *Mart. Nov. Gen. et Sp.* iii. *t.* 298, *f.* 2, *et t.* 300. *Hook. f. in Trans. Linn. Soc.* xxii. *t.* 15, 16. *Wedd. in Ann. Sc. Nat. ser.* 3, xiv. *t.* 11, *f.* 39 *ad* 42. *Hofmeist. Neue Beitr. Embryobild.* i. *t.* 16, *f.* 1 *ad* 5. *Solms-Laub. in Pringsh. Jahrb.* vi. 530. Ovulum quod nobis pendulum videtur ex descriptione Eichleri et Hofmeisteri 'erectum, atropum, toto ambitu ovario coalitum.' Embryo a nobis non visus.

10. **Corynæa,** *Hook. f. in Trans. Linn. Soc.* xxii. 31, *t.* 13, 14.—Spadices unisexuales v. androgyni. Fl. ☿: Perianthium tubulosum v. infundibulare, margine crenato-lacero, basi intus processu conico (ovarii rudimento?) auctum. Stamina 3, filamentis in tubum ima basi perianthii insertum connatis; antheræ basifixæ, ovato-cordatæ, coalitæ, 2-loculares, loculis apicibus disruptis dehiscentibus; pollen globoso-trigonum. Fl. ♀: Perianthium superum, e labiis 2 rotundatis brevibus antero-posticis. Ovarium ellipsoideum v. obovoideum, a dorso compressum, 1-loculare; styli 2, elongati, filiformes, decidui, stigmatibus capitellatis; ovulum 1, ab apice loculi pendulum. Fructus nuceus. Semen globosum v. subglobosum, albumine oleoso; embryo . . .—Herbæ glabræ, carnosæ, fusco-rubræ, amyligeræ; rhizoma tuberosum, lobatum, rarius ramos emittens, nudum; volva

upulari v. 0 (nisi pedunculi annulus). Pedunculi e lobos rhizomatis erumpentes, crassi, breves v. elongati, nudi, interdum oblique annulati. Spadices globosi, oblongi v. clavati, bracteis peltatis hexagonis valvatim connexis cito deciduis tecti. Flores utriusque sexus in mamillis deplanatis spadicis bracteis respondentibus conferti; pilis numerosissimis lineari-clavatis immixti; bracteolæ 0.

Species 4, Andium Peruviæ et Novæ Grenadæ incolæ. *Eichler in DC. Prod.* xvii. 137. *Chatin, Comp. Anat. t.* 96 (*Balanophora*).

11. **Rhopalocnemis,** *Jungh. in Nov. Act. Nat. Cur.* xviii. *Suppl.* i. 213. (Phæocordylis, *Griff. in Trans. Linn. Soc.* xx. 100, *t.* 8.)—Spadices unisexuales. Flores dioici. Fl. ♂: Perianthium infundibulare, margine crenato-lacero, ovarii rudimento 0. Stamina 3, filamentis in columnam elongatam solidam connatis; antheræ ellipsoideæ, basifixæ, in capitulum ovoideum septis verticalibus et transversis multilocellatum confluentes, apicibus disruptis dehiscentes, locellis demum confluentibus; pollen globoso-trigonum. Fl. ♀: Perianthium superum, e labiis 2 antero-posticis rotundatis. Ovarium ellipsoideum, a dorso compressum, 1-loculare; styli 2, elongati, filiformes, decidui, stigmatibus capitellatis; ovulum 1, pendulum. Fructus nuceus. Semen globosum, albuminis strato tenui; embryo magnus, amylaceus, non oleosus.—Herba crassa, robusta, flavo-fusca v. ferruginea, glabra, amyligèra; rhizoma magnum, multilobatum, nudum, rugosum; volva crassa, lobata, lobis subtriangularibus. Pedunculi breves, robusti, fl. ♀ nudi, fl. ♂ floribus imperfectis bracteisve deformatis verrucati. Spadices magni, oblongo-cylindracei, obtusi, bracteis peltatis hexagonis valvatim connexis deciduis tecti. Flores utriusque sexus pilis numerosissimis filiformi-clavatis immixti; bracteolæ 0.

Species 1, montium Indiæ maxime orientalis et Javæ incola. *Eichl. in DC. Prod.* xvii. 138. *Göpp. in Nov. Act. Nat. Cur.* xxii. *pars* i. *t.* 11 *ad* 25. *Hook. f. in Trans. Linn. Soc.* xxii. *t.* 12. *Hofmeist. Neue Beitrag. Embryobild.* i. *t.* 16, *f.* 6 *ad* 8. Descriptio seminis ex Hofmeistero.

Tribus VIII. Lophophyteæ.

12. **Lophophytum,** *Schott et Endl. Melet. Bot.* i. *t.* 1. (Archimedea, *Leandr. Sacram. in Ann. Sc. Nat. ser.* 2, vii. 32. Lepidophyton, *Hook. f. in Lindl. Veg. Kingd. ed.* 3, 90.)—Spadices androgyni, rarius unisexuales. Flores mamillis unisexualibus spadicis bracteis suffultis conferti. Fl. ♂: Perianthium 0. Stamina 2, libera, filamentis brevibus filiformibus; antheræ basifixæ, lineari-oblongæ, 2-loculares, loculis 2-locellatis rimis longitudinalibus dehiscentibus; pollen ellipsoideum, 3-striatum. Fl. ♀: Perianthii limbus truncatus, vertice intruso. Ovarium prismatico-clavatum, primum 1-loculare, demum ope placentæ in septum transformatæ 2-loculare; styli 2, fundo verticis intrusi floris inserti, breves, decidui, stigmatibus capitellatis; ovula 2, ab apice placentæ primum liberæ centralis pendula, demum cum loculi parietibus septoque coalita, anatropa. Fructus clavato-pyramidatus, nuceus, 1-locularis 1-spermus. Semen loculum fere implens, subovoideum, compressum, albumine oleoso; embryo . . . —Herbæ crassæ, glabræ, amyligeræ; rhizoma tuberosum v. cylindraceo-elongatum, globosum v. lobatum, tessellatim rimosum, plus minusve squamatum, basi nudum; volva 0. Pedunculi ramos v. lobos rhizomatis terminantes, breves, squamis multiseriatim imbricatis rigidis triangulari-ovatis acutis persistentibus cæruleo-nigrescentibus fuscisve tecti. Spadices oblongo-conici, demum elongati, flavi v. albi, mamillis floriferis primum confertis demum axi spadicis elongato remotis, ♀ in spadice inferioribus; bracteæ squamis pedunculi consimiles sed longius stipitatæ et deciduæ. Flores dense congesti, ♂ squamulis carnosis (fl. ♀ imperfectis ?) immixti; ♀ nudi v. rarissime bracteolati.

Species 4, descriptæ, quarum 2–3 adhuc dubiæ, Americæ tropicæ australis incolæ. *Eichl. in DC. Prod.* xvii. 127; *in Act. Bot. Congr. Par.* 1867, *t.* 1, *f.* 13 *ad* 19; *et in Mart. Fl. Bras.* iv. ii. *t.* 9 *ad* 5. *Hook. f. in Trans. Linn. Soc.* xxii. *t.* 9. *Wedd. in Ann. Sc. Nat. ser.* 3, xiv. *t.* 10, *f.* 29 *ad* 33. *Chat. Comp. Anat.* i. *t.* 100, 101. Ovula et semina a nobis non visa.

in floribus ♀ perpaucis ejusdem speciei stamen unum alterum subperfectum evolvitur, et rarissime ovulum adesse dicitur in ovarii rudimento floris quodam ♂, quod tamen nobis nunquam obvium fuit.

Species bene notæ paullo ultra 3000, tribuum 3 ultimarum pro maxima parte inter tropicos in utroque orbe vigentes, tribuum 3 priorum imprimis extratropicæ, boreales v. australes; plurimæ tamen e tribu *Euphorbiearum*, perpaucæ e *Stenolobieis* v. *Buxeis* plus minus tropicales sunt. In regionibus Arcticis Antarcticis uti in summis Alpibus *Euphorbiaceæ* omnino desunt.

Euphorbiaceæ seriem plantarum ostendunt a cæteris ordinibus haud difficile separandam, si specimina adsint utriusque sexus bene evoluta, etsi genera nonnulla primo aspectu *Celastrineis Sterculiaceis*, etc., inter *Polypetalas* accedere videantur, alia quodammodo *Urticeis* inter *Monochlamydeas* approximantur, semper tamen characteribus certis distinguenda. Genera plurima, ad specimina imperfecta definita, ab auctoribus cum ordinibus variis confusa, melius nota locum certum obtinuerunt, alia sexu unico tantum descripto adhuc valde dubia remanent.

Ordo vastus et polymorphus, olim quoad genera eo tempore nota optime ab Adriano de Jussieu compositus, quam maxime auctus, cura diligentissima a H. Baillono et a Muellero Argoviensi elaboratus est. Hi tamen auctores sententia valde differunt quoad generum tribuumque limites et ordinationem. Affinitates naturales a Baillono potius quæsitæ etsi non semper apte consecutæ, a Muellero sæpissime neglectæ et divisiones plurimæ Prodromi, tam tribus et subtribus quam genera et sectiones, characteribus certis ad extremum secutis, quam maxime artificiales evadunt. Si methodum cum affinitatibus naturalibus (consanguinitate) congruum quærimus, characterum plurium valor in ordine valde inconstans apparet. Inflorescentia, hucusque nimis neglecta, sæpe affinitates etiam tribuales indicat, etsi non semper exacte definienda. Calycis ♂ modus et præsertim æstivatio, in generibus perplurimis constans, in *Crotone* variat. Antherarum forma et dehiscentia sæpissime characteres genericos optimos præbent, in *Phyllantho* tamen species quam maxime affines separant. Characteres e calyce ♀ (a ♂ sæpius diverso) e carpellorum numero, e stylorum indole, sæpe boni evadunt, sed caute utendi, nam in generibus pluribus naturalibus singulatim variant. Stipulæ, glandulæ receptaculi floris ♂, discus hypogynus floris ♀, strophiola v. caruncula seminum, in speciebus constantes, rarissime in charactere generico feliciter utantur. Tribus igitur sex, hic pro naturales receptæ, e characteribus sæpe valde diversis limitantur. Divisiones ulteriores sæpe nimis artificiales sunt, sed meliores adhuc non occurrunt.

FORMÆ ABNORMES.

Bracteæ 4–5, rarius ∞, in involucrum calyciforme connatæ, cymulam androgynam includunt in *Euphorbieis*; 2 rarius ∞ ad basin inflorescentiæ vacuæ laxe v. arcte imbricatæ in *Buxeis* nonnullis, in *Uapaca*, *Dalechampiis* plerisque et minus distincte in aliis paucis generibus; 2 ad apicem pedicelli in globum clausum connatæ florem v. cymulam juniorem includentem, per anthesin varie ruptum in *Æxtoxico* et *Pera*; bractea rhachi margine undique adnata alabastra includit, per anthesin dorso irregulariter rupta in *Hura* et *Algernonia*.

Glandula magna utrinque ad basin bractearum in *Hippomaneis* plerisque et in paucis aliis, glandulæ bractearum contiguarum involucri in unam connatæ in *Euphorbia* et *Calycopeplo*, omnes involucri in unam annularem connatæ in *Synadenio*, irregulariter in involucro dorsales in *Pedilantho*, ad latera loborum involucri hinc inde deficientes in *Anthostemate*.

Squamellæ exteriores sepaliformes v. glanduliformes in calyce ♀ ad basin segmentorum iisque alternæ in *Epiprino*, in *Julocrotonibus* nonnullis et in *Conceveiba*.

Calyx rudimentarius v. 0 in floribus ♂ *Stylooeratis* et in iis specierum plurimarum v. omnium *Uapacæ*, *Gymnanthis*, *Actinostemonis*, *Adenopeltidis*, *Colliguajæ*, *Dalembertiæ*, *Peræ* et *Euphorbiearum*; in floribus ♀ eorundem generum interdum evolvitur et hinc inde deest in aliis generibus ubi in flore ♂ conspicuus est.

Calyx fructifer persistens valde auctus in *Epiprino*, *Blachia*, *Dimorphocalyce* et *Sagotia*.

Petala subvalvata concava v. biconcava in *Galearia* et *Dicœlia*.

Antherarum loculi apice poro dehiscentes in *Poranthera*, antheræ distincte 4-locellatæ v. varie 4-valves in *Tetrorchidio*, *Cleidio*, *Macaranga* et *Endospermo*.

Ovarium 1-loculare stylis 2–3 in *Antidesmate* et *Crotonopside*. Pistillum totum 1-carpicum in *Cometia*, *Æxtoxico*, *Eremocarpo*, *Hemicyclia*, et sæpius in *Drypetide*. Ovarium in loculos duplo carpellorum numero divisum in *Stylooeratide*.

Capsula loculicide dehiscens valvis non septicide solutis in *Simmondsia*, *Buxo* et *Oldfieldia*; in perpluribus generibus coccis mox bivalvibus, capsula fere simul loculicide et septicide dehiscit.

Fructus drupaceus 1-spermus in *Sarcococca*, in *Drypetide* generibusque ei affinibus paucisque aliis, 2-3-pyrenus in *Stylocerate*, et *Bridelia*, subbaccatus 3-locularis in *Bischofia*, capsularis etsi 1-spermus in *Pseudantho*, *Stachystemone*, *Erythrococca*, et in paucis speciebus in alia genera dispersis.

Albumen perparcum v. 0 v. membranaceum cotyledonibus crasso-carnosis v. contortuplicatis in *Cleistantho*, *Amanoa*, *Discocarpo*, *Lachnostyle*, *Actephila*, *Forchhammera*, *Hevea*, *Elateriospermo*, *Simmondsia*, et forte in nonnullis aliis adhuc imperfecte notis, leviter ruminatum in *Ærtoxico*.

Embryo albumine quater ad sexies brevior in *Daphniphyllo*.

CONSPECTUS TRIBUUM (exceptis neglectis).

Tribus I. Euphorbieæ. Involucrum calyciforme, cum floribus inclusis plurimis masculis 1-andris unico fœmineo centrali florem unicum hermaphroditum simulans. Perianthia vera minima v. 0.

Tribus II. Stenolobieæ. Embryo in centro albuminis linearis, cotyledonibus radicula non v. vix latioribus. Cætera nunc *Phyllanthearum* nunc *Crotonearum*. (Fruticuli Australienses sæpius ericoidei v. herbæ humiles Australianæ cum una austro-Andina).

Tribus III. Buxeæ. Ovula in loculis gemina rarius solitaria, *raphe dorsali*. Flores distincti. Stamina sepalis opposita v. ∞. Embryo varius. Capsula sæpius loculicide dehiscens. (Genera hemisphærii borealis extratropica v. montana.)

Tribus IV. Phyllantheæ. Flores distincti. Embryonis cotyledones radicula multo latiores. Stamina omnia v. exteriora sepalis opposita. Ovula in loculis gemina.

Tribus V. Galearieæ. Stamina sepalis opposita *Phyllanthearum*. Ovula in loculis solitaria *Crotonearum*.

Tribus VI. Crotoneæ. Flores distincti. Embryonis cotyledones radicula multo latiores. Stamina omnia v. exteriora sepalis alterna. Ovula in loculis solitaria.

Subtribus 1. Jatropheæ. *Paniculæ 2-3-chotomæ cymosæ, rarius ad fasciculum terminalem reductæ, androgynæ flore centrali fœmineo v. unisexuales.*

Subtribus 2. Eucrotoneæ. *Racemi v. spicæ terminales, androgyni v. rarius unisexuales. Flores ♂ sæpius petaliferi. Filamenta in alabastro apice inflexa antheris reversis (demum sæpius erecta).*

Subtribus 3. Chrozophoreæ. *Racemi spicæ v. rarius paniculæ racemiformes axillares rarius terminales v. ad apices ramorum paniculati. Flores ♂ sæpissime petaliferi. Antheræ jam in alabastro erectæ.*

Subtribus 4. Adrianeæ. *Racemi v. spicæ terminales, simplices. Petala 0. Styli distincti v. vix basi connati.*

Subtribus 5. Acalypheæ. *Racemi v. spicæ axillares v. ad apices ramorum paniculati. Petala 0. Calyx ♂ valvatus v. rarius lobis leviter imbricatis. Styli sæpius distincti.*

Subtribus 6. Geloniеæ. *Calyx ♂ valde imbricatus. Cætera fere Acalyphearum.*

Subtribus 7. Plukenetieæ. *Stylus sæpius cum ovario continuus columnaris apice breviter nunc brevissime lobatus. Cætera fere Acalyphearum.*

Subtribus 8. Hippomaneæ. *Calyx ♂ parvus, jam ante anthesin apertus, nunc minimus v. 0. Cætera Acalyphearum v. Plukenetiarum.*

CONSPECTUS GENERUM.

Tribus I. Euphorbieæ. Flores monoici, ♂ ∞ cum ♀ unico centrali involucro calyciformi cincti florem hermaphroditum simulantes. Fl. ♂: Stamen 1, filamento in pedicellum articulato, perianthio 0 v. ad squamellam minutam ad articulationem reducto. Fl. ♀: Perianthium 0 v. calyx brevis. Ovarium 3-loculare, ovulis in loculis solitariis. Capsula 3-cocca. Semina albuminosa; cotyledones latæ, planæ.

Florum fasciculus in involucro inclusus est cymula, cum cymulis seu glomerulis androgynis hinc inde in variis generibus *Euphorbiacearum* observandis (e.g. in *Crotoneis* e subtribu *Jatrophearum*) comparanda, inflorescentia centrifuga, flore terminali seu centrali fœmineo primum evoluto, masculis in circumferentia sæpe in fasciculos 4–5-confertis ramos primarios cymæ indicantes. Sententiæ Bailloni florem revera hermaphroditum esse nequaquam assentiri possumus.

1. Pedilanthus. Involucrum irregulare, obliquum declinatum v. urceolatum, postice appendice intus glandulosa auctum. Cætera *Euphorbiæ*.—*Amer. trop., California.*

2. Euphorbia. Involucrum calyciforme, regulare v. parum inæquale. Glandulæ extra lobos iis alternæ, distinctæ. Bracteolæ intra involucrum lineares integræ divisæ v. obsoletæ.—*Utriusque orbis reg. calid et temp.*

3. SYNADENIUM. Involucrum alte 5-lobum, æquale. Glandulæ in cupulam seu discum integrum lobos cingentem connatæ. Bracteolæ intra involucrum 5 majores latæ, fasciculos florum ♂ includentes, dorso in cupulam circa floris ♀ stipitem connatæ.—*Afr. trop. et austr.*

4. CALYCOPEPLUS. Involucrum alte 4-lobum, æquale. Glandulæ extra lobos iis alternæ, parvæ, distinctæ, stipitatæ v. 0. Bracteolæ intra involucrum 4 majores latæ, fasciculos florum includentes, dorso liberæ. Calyx floris ♀ 4–6-lobus.—*Australia.*

5. ANTHOSTEMA. Involucrum alte lobatum, latere exteriore hians. Glandulæ magnæ, ad latera loborum hinc inde deficientes. Bracteolæ intra involucrum majores flores ♂ includentes, dorso liberæ. Calyx utriusque sexus parvus, 3–4-dentatus.—*Afr. trop., Madagascaria.*

Tribus II. Stenolobieæ. Perianthium calycinum petaloideum v. duplex. Stamina sepalis opposita v. ∞. Ovula in loculis ovarii solitaria v. gemina in angulo centrali contigua. Embryo in centro albuminis linearis, cotyledonibus radicula non v. vix latioribus. Frutices sæpius ericoidei foliis integerrimis coriaceis, v. herbæ humiles foliis parvis membranaceis. Species, unica austro-Andina excepta, omnes Australianæ.

* *Ovarii loculi 2-ovulati.*

6. PORANTHERA. Sepala 5, petaloidea. Petala parva v. 0. Stamina 5, antheris poris terminalibus dehiscentibus. Styli lineares, 2-partiti. Capsula depresso-globosa. Herbæ suffruticesve, racemis capituliformibus in corymbo terminali.—*Australia.*

7. MICRANTHEUM. Sepala 6, petaloidea, 2-seriata. Petala 0. Filamenta libera v. vix basi connata, ovarii rudimentum cingentia. Antherarum loculi longitudinaliter dehiscentes. Ovarium 3-lobum. Capsula 3-locularis. Frutices ericoidei, foliis ad nodos alternos ternis.—*Australia.*

8. PSEUDANTHUS. Capsula abortu 1-locularis 1-sperma. Folia ad nodos oppositos v. alternos solitaria. Cætera *Micranthei.*—*Australia.*

9. STACHYSTEMON. Filamenta sæpius numerosa, omnia v. saltem interiora in columnam centralem coalita absque rudimento ovarii. Cætera *Pseudanthi.*—*Australia.*

** *Ovarii loculi 1-ovulati.*

† *Stamina ∞, sæpius numerosa.*

10. BEYERIA. Petala sæpius adsunt. Glandulæ petalis alternæ. Filamenta brevissima, in receptaculo hemisphærico congesta. Stigma sessile, peltatum v. rarius alte 3-fidum. Frutices. Flores axillares v. rarius in racemulo terminali.—*Australia.*

11. RICINOCARPUS. Petala adsunt. Glandulæ petalis alternæ. Filamenta alte in columnam centralem connata. Styli 2-fidi, basi breviter connati. Frutices. Flores in racemulo terminali, rarius pseudo-axillares.—*Australia.*

12. BERTYA. Petala 0. Disci glandulæ 0. Filamenta alte in columnam centralem connata. Styli distincte 2–4-fidi, sæpius 3-fidi. Frutices. Flores axillares, pauci.—*Australia.*

†† *Stamina numero sepalorum v. petalorum dupla v. pauciora, filamentis distinctis v. vix basi connatis.*

13. MONOTAXIS. Petala adsunt. Stylorum rami fimbriati. Capsula inappendiculata. Herbæ suffruticesve humiles, cymis terminalibus densis.—*Australia.*

14. DYSOPSIS. Petala desunt. Styli indivisi, lanceolati, subfimbriati. Capsula inappendiculata. Herba tenera, prostrata, radicans. Flores ad axillas solitarii v. ad apices ramorum conferti.—*Amer. austr. extratrop. Andina.*

15. AMPEREA. Petala desunt. Stylorum rami integri. Capsula dentibus 6 erectis appendiculata. Herbæ suffruticesve, foliis parvis v. 0. Flores ad nodos glomerati.—*Australia.*

Tribus III. Buxeæ. Perianthium calycinum sepalis imbricatis v. 0. Petala 0. Stamina sepalis opposita v. ∞. Ovula in loculis ovarii gemina, rarius solitaria, axi affixa v. ab angulo centrali plus minus distantia, raphe dorsali. Styli indivisi. Cotyledones variæ.

* *Stamina ∞. Ovarii rudimentum in fl. ♂ 0.*

16. SIMMONDSIA. Sepala fl. ♂ 5. Filamenta brevissima, antheris magnis erectis. Ovarium 3-loculare, loculis 1-ovulatis, stylis 3 longis caducissimis. Capsula 3-valvis. Albumen 0. Cotyledones crasso-carnosæ. Frutex foliis oppositis.—*California.*

17. STYLOCERAS. Perianthium fl. ♂ 0. Filamenta brevissima, bracteæ affixa, antheris magnis erectis. Ovarium 2-3-carpellare, 4-6-locellatum, locellis 1-ovulatis, stylis 2-3 longis persistentibus. Drupa indehiscens, pyrenis tot quot locelli v. abortu paucioribus. Frutices foliis alternis. Spicæ axillares, breves.—*Amer. trop.*

** *Stamina tot quot sepala iisque opposita. Ovarii rudimentum in fl. ♂ evolutum.*

18. SARCOCOCCA. Sepala ♂ 4. Filamenta elongata. Frutices foliis alternis integerrimis. Florum racemuli axillares, densi, ♀ ad basin racemuli.—*Ind. or.*

19. BUXUS. Sepala ♂ 4. Filamenta elongata. Frutices foliis oppositis integerrimis. Florum racemuli axillares, densi v. pauciflori, ♀ in racemulo terminali.—*Orbis vet. hemisph. borealis, Madagasc., Ind. occid.*

20. PACHYSANDRA. Sepala ♂ 4. Filamenta elongata. Herbæ foliis alternis sæpius grosse dentatis. Spicæ longiusculæ ad basin caulis infra folia v. terminales, fl. ♀ ad basin spicæ paucæ v. unicus terminalis.—*Amer. bor., Japonia.*

Tribus IV. Phyllantheæ. Perianthium calycinum, 1-2-seriale, v. duplex petalis parvis squamiformibus rarius calycem æquantibus. Stamina 1-2-serialia, seriei exterioris sepalis opposita, v. rarius in centro floris ∞. Ovula in loculis ovarii gemina, in angulo centrali contigua, raphe ventrali. Cotyledones radicula multo latiores. Inflorescentiæ axillares v. laterales, rarius ad apices ramorum subpaniculatæ.

* *Folia alterna, indivisa. Flores petaliferi, ♂ ad axillas v. nodos glomerati, ♀ sæpe solitarii.*

Excepta: Petala interdum desunt in fl. ♀ v. omnibus *Discocarpi, Amanoæ* et *Actephilæ*

† *Calyx valvatus.*

21? STENONIA. Filamenta circa rudimentum ovarii libera. Ovarium 3-loculare. Fructus . . . —*Madagasc.*

22. BRIDELIA. Filamenta sub rudimento ovarii in columnam connata. Ovarium 2-loculare. Bacca 2-pyrena. Albumen sæpius carnosum rarius parcum v. 0; cotyledones planæ. Foliorum venæ secundariæ transversim parallelæ.—*Orbis veteris reg. trop.*

23. CLEISTANTHUS. Filamenta sub rudimento ovarii in columnam connata. Ovarium 3-loculare. Capsula 3-cocca. Albumen parcum v. 0; cotyledones plicatæ v. crasso-carnosæ. Foliorum venæ secundariæ reticulatæ.—*Orbis veteris reg. trop.*

†† *Calyx imbricatus.*

a. *Albumen parcum v.* 0.

24. AMANOA. Filamenta circa rudimentum ovarii libera. Stigmata sessilia, disciformia. Albumen perparcum v. 0; cotyledones crasso-carnosæ.—*Amer. trop., Africa trop. occid.*

25. DISCOCARPUS. Filamenta basi in columnam connata, sub ovarii rudimento libera, patentia. Discus fl. ♂ glaber. Styli superne recurvi in laminam latam expansi. Albumen parcum; cotyledones latissimæ, carnosulæ, valde plicatæ.—*Brasilia, Guiana.*

26. LACHNOSTYLIS. Filamenta basi in columnam connata, sub ovarii rudimento libera, patentia. Discus fl. ♂ villosissimus. Styli breves, patentes, cuneati, breviter 2-fidi. Albumen parcum; cotyledones latissimæ, carnosulæ, valde plicatæ.—*Afr. austr.*

27. ACTEPHILA. Filamenta in medio disco circa ovarii rudimentum libera v. basi breviter connata. Styli breves, indivisi v. 2-fidi. Albumen parcum; cotyledones latissimæ, carnosæ, plicatæ.—*Asia trop., Australia.*

b. *Albumen (ubi notum) crassum.*

28. WIELANDIA. Filamenta in columnam connata, sub ovarii rudimento radiato-5-lobo breviter libera. Ovarium 5-loculare.—*Seychelles.*

29. SAVIA. Filamenta circa ovarii rudimentum libera. Discus annularis angulatus cupulatus v. varie lobatus. Ovarium 3-loculare. Albumen carnosum; cotyledones planæ.—*Ind. occid., Madagasc.*

30. ANDRACHNE. Filamenta circa ovarii rudimentum libera. Disci glandulæ distinctæ.

Ovarium 3-loculare. Albumen carnosum; cotyledones planæ.—*Eur.*, *Asia temp. et trop.*, *Afr. austr.*, *Amer. bor.*, *Peruvia?*

** *Folia alterna indivisa* (*subopposita in perpaucis* Phyllanthis). *Flores apetali*, ♂ *ad axillas v. nodos glomerati rarius subcymosi*, ♀ *sæpe solitarii. Calyx imbricatus. Stamina* 1-*seriata* (2–3-*seriata in perpaucis* Phyllanthis). *Styli v. styli rami erecti v. recurvi, tenues v. apice solo dilatati. Cocci* 2-*valves v. bacca* 3-*locularis.*

† *Capsula in coccos* 2-*valves dissiliens* (*indehiscens in perpaucis* Phyllanthis).

31. Agyneia. Fl. ♂ sepala margine tenui albo cincta, cæterum incrassata, quasi squama adpressa aucta. Antheræ 3, ad apicem columnæ sessiles. Ovarii rudimentum 0. Herbæ diffusæ v. patentim ramosæ, foliis parvis.—*Asia trop.*, *ins. Mascar.*

32. Sauropus. Fl. ♂ sepala basi incrassata v. squama prominula aucta. Filamenta 3, alte in columnam connata. Ovarii rudimentum 0. Frutices suffruticesve foliis distichis membranaceis. Fl. ♀ calyx sub fructu sæpe auctus.—*Asia trop.*

33. Cluytiandra. Omnia *Sauropodis* nisi filamenta 5, basi breviter tantum connata.—*Africa trop.*

34. Phyllanthus. Sepala basi nuda. Stamina in centro floris ♂ 2–6 rarissime ∞, filamentis connatis v. liberis; antheræ polymorphæ; ovarii rudimentum 0. Fl. ♀: Pistillum 3–∞-merum; styli sæpius 2-fidi. Herbæ frutices v. arbores.—*Reg. calid. utriusque orbis.*

35. Leptonema. Sepala basi nuda. Stamina 5 antheris *Antidesmatis*. Ovarii rudimentum 0. Pistillum 3–5-merum; styli 2-partiti. Frutex. Florum ♂ umbellæ pedunculatæ.—*Madagascaria.*

36. Securinega. Sepala basi nuda. Stamina iis opposita, sæpius 5. Ovarii rudimentum sæpius evolutum. Pistillum 3-merum; styli bifidi. Habitus *Phyllanthi.*—*Amer. trop.*, *Afr. trop. et austr.*, *ins. Mascar.*, *Asia temp.*

37. Neoroepera. Sepala basi nuda. Stamina 5–6, circa discum planum libera. Styli indivisi, elongati, clavati. Habitus *Phyllanthi.*—*Australia.*

†† *Bacca* 3-*locularis septis tenuibus v. evanidis. Seminum testa ventre duplex lacunam fovens.*

38. Fluggea. Stamina sæpius 5. Ovarii rudimentum in fl. ♂ evolutum. Styli 2-fidi. Frutices dioici, calyce *Phyllanthi.*—*Ind. or.*, *Australia.*

39. Breynia. Filamenta 3 alte in columnam connata. Ovarii rudimentum in fl. ♂ 0. Styli indivisi v. 2-fidi. Frutices monoici, calyce ♂ turbinato supra plano fere clauso, ♀ demum explanato.—*Asia trop.*, *Australia*, *ins. maris Pacifici.*

*** *Folia alterna. Flores apetali*, ♂ *ad axillas v. nodos glomerati. Calyx imbricatus. Stamina sæpe* ∞. *Styli valde dilatati, patentes. Fructus drupaceus, indehiscens, abortu* 1-*spermus, rarius* 2-*pyrenus* 2-*spermus, v. demum* 3–4-*coccus.*

40. Petalostigma. Filamenta ∞, basi in columnam connata, antheris erectis. Ovarii rudimentum in fl. ♂ 0. Pistillum sæpius 4-merum; styli in laminas planas patentes expansi. Fructus demum in coccos 2-valves dissiliens.—*Australia.*

41. Putranjiva. Stamina pauca in centro floris. Styli breves, patentes, in ramos latos carnosos expansi. Arbores monoici v. dioici.—*Ind. or.*

42. Drypetes. Stamina numero sepalorum æqualia v. subdupla, circa discum centralem planum concavum v. leviter convexum affixa. Ovarium 1–2-loculare; stigmata (v. styli) peltata v. reniformia, subsessilia. Arbores fruticesve dioici.—*Amer. trop.*

43. Forchhammeria. Stamina ∞, circa ovarii rudimentum affixa. Ovarium 2-loculare. Stigmata in discum sessilem orbiculatum sub-2-lobum connata. *Albumen* 0; *cotyledones convolutæ*. Arbor.—*Mexico.*

44. Hemicyclia. Stamina ∞, circa discum centralem latum concavum affixa. Ovarium 1-loculare; stigma (v. stylus) sessile, late reniforme v. orbiculatum. Arbores fruticesve dioici.—*Asia trop.*, *Australia.*

45. Cyclostemon. Stamina ∞, circa discum centralem latum planum v. concavum affixa. Ovarium 2–4-loculare; styli breves v. brevissimi, stigmatibus crassis valde dilatatis (rarius elongatis?). Arbores dioici, ramis defoliatis sæpe floriferis.—*Asia et Afr. trop.*

**** *Folia opposita v. verticillata, indivisa. Flores apetali, ♂ ad axillas fasciculati v. in racemulis brevibus densis v. cymulosis fasciculatis ramosisve dispositi, ♀ pauci subsessiles v. pedicellati. Calyx imbricatus. Capsula in coccos 2-valves dissiliens (v. rarius valvatim dehiscens?).*

† *Folia omnia opposita.*

46. Dissiliaria. Sepala 4–6. Filamenta 4–∞, brevissima. Ovarii rudimentum in fl. ♂ 0. Styli lineares, indivisi. Florum fasciculi axillares v. subterminales.—*Australia.*

47. Longetia. Sepala 6 rarius 5. Filamenta 10–18, calyce longiora. Ovarii rudimentum v. receptaculum centrale prominens. Styli brevissimi, lati, crassi. Inflorescentia ♂ axillaris, umbellulis sessilibus v. pedunculatis.—*Nov. Caled.*

48. Bureavia. Sepala 4. Filamenta 8–12, calyce longiora. Styli brevissimi, lati, patentes. —*Nov. Caled., ins. Fiji.*

49. Choriophyllum. Sepala 4, rarius 5–6. Filamenta 4, calyce longiora. Styli brevissimi, lati, crassi. Inflorescentia ♂ axillaris, laxe racemoso-cymulosa.—*Archip. Malay.*

†† *Folia sæpius (nec semper) 3–4-natim verticillata.*

50. Toxicodendron. Sepala 5–12, brevia et irregularia. Stamina ∞, dense conferta, filamentis brevissimis, antheris magnis erectis, loculis late 2-valvibus. Styli basi connati, apice patentes, crassi, indivisi. Capsula crassa, dura. Inflorescentia ♂ axillaris, dense cymulosa v. breviter racemosa.—*Afr. aust.*

51. Mischodon. Sepala 5–8. Stamina 5–10, filamentis filiformibus. Styli plani, patentes, obovati, crassiusculi. Inflorescentia ♂ axillaris, dense breviterque paniculata.—*Zeylania.*

***** *Folia opposita v. alterna, digitatim foliolata. Cymulæ racemi v. paniculæ axillares v. laterales. Flores apetali.*

52. Oldfieldia. Calyx ♂ parvus, breviter 5–7-fidus. Stamina 4–10, circa discum crassum. Capsula globosa, dura, loculicide 2-valvis. Folia opposita, 5–7-foliolata. Cymulæ ♂ laxæ, pedunculatæ.—*Afr. trop. occid.*

53. Bischofia. Sepala 5. Stamina 5, filamentis brevibus antheris magnis. Styli lineares, indivisi. Fructus subbaccatus, indehiscens. Folia alterna, 3-foliolata. Racemi paniculato-ramosi.—*Asia trop., ins. maris Pacifici.*

54. Piranhea. Calycis lobi v. segmenta 4–6. Stamina 1–10, filamentis tenuibus, antheris parvis. Styli lineares, indivisi. Capsula 3-cocca. Folia alterna, 3-foliolata. Racemi simplices.—*Bras. bor., Guiana.*

****** *Folia alterna, indivisa. Racemi v. spicæ ♂ amentiformes v. tenues simplicesque, v. paniculato-ramosi, axillares laterales v. rarius simul subterminales. Flores dioici, rarissime petaliferi.*

† *Fructus carnosus v. demum induratus, indehiscens v. rarissime loculicide 2-valvis.*

55. Uapaca. Amenta ♂ subglobosa et flores ♀ solitarii, *primum involucro 4–6-phyllo demum reflexo inclusa.* Calyx minimus v. 0. Stamina circa rudimentum ovarii 4–5. Ovarium sæpius 3-loculare, stylis apice dilatatis ramosis.—*Afr. trop., Madagasc.*

56. Aporosa. Amenta ♂ densa, cylindracea. Spicæ ♀ breves. Stamina 2–5 in centro floris, ovarii rudimento minuto v. 0. Ovarium 2–3-loculare, stylis 2-fidis sæpe laciniatis.—*Asia trop.*

57. Daphniphyllum. Racemi ♂ et ♀ laxiusculi. Stamina 5–18 in centro floris conferta, filamentis brevibus, antheris magnis 2-valvibus. Ovarii rudimentum in fl. ♂ 0. Ovarium 2-loculare, stylis crassiusculis indivisis. Embryo parvus.—*Asia trop., Archip. Malay.*

58. Baccaurea. Racemi v. spicæ utriusque sexus tenues simplices v. ♂ ramosi. Stamina circa ovarii rudimentum 4–5 v. rarius numero dupla. Ovarium sæpius 3-loculare, stylis v. stigmatibus brevibus crassis v. planis apice sæpius brevissime lobatis v. fimbriatis.—*Asia trop., ins. maris Pacifici.*

59. Cometia. Amenta ♂ densa, cylindracea. Racemi ♀ pauciflori. Stamina 3–5, sub ovarii rudimento apice dilatato. Ovarium 1-loculare, stylo dilatato suborbiculari excentrico carnosulo. —*Madagasc.*

60. Antidesma. Spicæ utriusque sexus tenues, simplices v. paniculato-ramosæ. Calyx alte divisus. Stamina circa ovarii rudimentum 3–5. Ovarium 1-loculare, stylis 3 sæpissime 2-lobis.—*Asia et Afr. trop., ins. maris Pacifici.*

61. Hieronyma. Racemi utriusque sexus pedicellis brevissimis tenues, paniculato-ramosi. Calyx sinuato-dentatus. Discus fl. ♂ cupulatus v. cyathiformis. Stamina circa rudimentum ovarii 2–5. Ovarium sæpius 2-loculare, stylis brevibus 2-partitis. Indumentum sæpe lepidotum.—*Amer. trop.*

62. Mesobotrya. Racemi utriusque sexus tenues, simplices v. fasciculati. Calyx 5-fidus. Stamina circa rudimentum ovarii 5, disci glandulis 5 alterna. Ovarium 2-loculare, stylis brevibus 2-fidis.—*Afr. trop.*

63. Ægtoxicon. Racemi simplices. Sepala distincta, valde imbricata. *Petala calycem æquantia.* Stamina circa rudimentum ovarii ad 5. Ovarium 1-loculare, stylo unico. Indumentum insigniter lepidotum.—*Chile.*

†† *Capsulæ cocci a columella persistente dissilientes.*

64. Hymenocardia. Spicæ ♂ amentiformes; racemi ♀ breves, laxi. Stamina 4–5, filamentis in centro floris sub ovarii rudimento sæpius connatis. Ovarium 2-loculare, septo contrarie compressum, stylis linearibus indivisis. Cocci *plani, samaroidei,* margine interiore post casum hiantes.—*Asia et Afr. trop.*

65. Richeria. Racemi v. spicæ ♂ tenues, ♀ breves, densi. Stamina circa rudimentum ovarii 3–4. Ovarium 3-loculare, stylis brevibus crassis latis integris v. breviter 2-fidis.—*Amer. trop.*

66. Thecacoris. Racemi utriusque sexus pedicellis brevibus tenues. *Petala sæpius adsunt minima.* Stamina circa rudimentum ovarii 5. Ovarium 3-loculare, stylis longiusculis apice 2-fidis.—*Afr. trop., Madagasc.*

67. Cyathogyne. *Caulis herbaceus.* Racemi pedicellis brevissimis v. spicæ utriusque sexus tenues. Stamina circa ovarii rudimentum apice disciforme 5. Ovarium 3-loculare, stylis subintegris obtusis v. apice retusis.—*Afr. trop.*

Genus anomalum. Flores monoici, petaliferi.

68. Dicoelia. Racemi longi, cymulis androgynis. Petala subvalvata, basi biconcava. Antheræ 5, loculis in cavis petalorum receptis demum exsertis.—*Borneo.*

Tribus V. Galearieæ. Perianthium duplex petalis calyce longioribus, v. calycinum 1-seriale. Stamina 1–2-serialia, seriei exterioris ut in *Phyllantheis* sepalis opposita, petalis alterna. Ovula in loculis ovarii ut in *Crotoneis* solitaria. Ovarii rudimentum in fl. ♂ sæpissime evolutum. Tribus forte nimis artificialis sed genera nec sub *Phyllantheis* nec sub *Crotoneis* bene militant.

69. Galearia. Racemi terminales, simplices, tenues. Flores 5-meri. Petala subvalvata. Stamina 10; antheræ variæ. Drupa transversim oblonga, indehiscens.—*Penins. et Archip. Malay.*

70. Microdesmis. Flores ad axillas dense fasciculati, 5-meri, petaliferi. Petala imbricata. Stamina 5 v. 10; antherarum loculi paralleli. Drupa subglobosa, indehiscens.—*Afr. et Asia trop.*

71. Pogonophora. Racemi axillares, paniculati. Sepala, petala et stamina 5; antheræ lineares, loculis adnatis. Capsula 3-cocca.—*Amer. trop.*

72. Tetrorchidium. Racemi axillares, simplices v. subramosi. Sepala 3. Petala 0. Antheræ 3, subsessiles, 4-locellatæ, 4-valves. Capsula 2–3-cocca.—*Amer. trop.*

Tribus VI. Crotoneæ. Perianthium ♂ nunc calycinum 1- v. rarius 2-seriale, nunc duplex, petalis sæpe calycem excedentibus. Stamina 1–2-serialia, seriei exterioris sepalis alterna, v. sæpius in centro floris ∞, pauca (interdum 1–2) v. numerosa nunc numerosissima. Ovula in loculis ovarii solitaria. Cotyledones radicula multo latiores. Inflorescentia varia, sæpius racemoso-spicata v. paniculata.

Subtribus 1. Jatropheæ. *Paniculæ 2–3-chotome cymosæ, rarius ad fasciculum terminalem reductæ, androgynæ flore centrali fœmineo, v. unisexuales.*

* *Flores apetali.*

73. Elateriospermum. Folia integra, pennivenia. Paniculæ pauciflore, laxæ. Sepala valde imbricata. Stamina 10–18, receptaculo villoso. Ovarii rudimentum 0.—*Penins. et Archip. Malay.*

74. Cunuria. Folia integra, pennivenia. Paniculæ pauciflore. Sepala valde imbricata. Stamina 10, receptaculo valde elevato. Ovarii rudimentum staminibus subæquale.—*Bras. bor.*

75. **Micrandra.** Folia integra, penninervia. Paniculæ laxæ. Calyx vix imbricatus. Stamina 5. Ovarii rudimentum obscurum.—*Brasilia.*

76. **Avellanita.** Folia integra, subtriplinervia. Flores pauci in fasciculum terminalem dispositi. Calyx valvatus. Stamina numerosa.—*Chile.*

77. **Hevea.** Folia 3-foliolata. Paniculæ laxæ. Calyx 5-dentatus v. breviter 5-lobus. Stamina 5–10, filamentis sub ovarii rudimento in columnam connatis.—*Brasilia, Guiana.*

** *Flores ♂ petaliferi v. rarius calyce petaloideo apetali.*

78. **Joannesia.** Folia 5-foliolata. Paniculæ densæ. Calyx subvalvatus. Stamina 7–10. Drupa 2-locularis, indehiscens.—*Brasilia.*

79. **Jatropha.** Folia digitatim venosa v. lobata, rarius integerrima penninervia. Flores paniculati v. fasciculati. Calyx imbricatus (in *Cnidoscolo* petalis deficientibus petaloideus). Stamina 10 v. pauciora v. in *Cnidoscolo* plura. Capsula 2–3-cocca.—*Orbis utriusque reg. calid. imprimis Amer. et Afr.*

80. **Acidocroton.** Folia integra, penninervia, parva. Florum fasciculi simplices. Calyx parvus, patens. Stamina ∞. Capsula 2-cocca. Fruticulus aculeis geminis horridus.—*Cuba.*

81. **Tritaxis.** Folia integra, penninervia. Cyma ∞-flora, laxa v. densa. Calycis lobi subimbricati. Staminum verticilli circa columnam centralem 1 v. 2, pentandri, staminibus 2 v. 3 columnam terminantibus. Capsula 3-cocca.—*Asia trop.*

82. **Aleurites.** Folia digitatim venosa, sæpe 3-loba. Paniculæ floribundæ. Calyx valvatim ruptus. Petala 5. Stamina ∞. Drupa indehiscens.—*Asia or., ins. maris Pacifici.*

83. **Garcia.** Folia integra, penninervia. Florum fasciculi simplices (nunc ad florem unicum reducti). Calyx valvatim ruptus. Petala 8–12. Stamina ∞. Capsula 3-cocca.—*Amer. trop.*

Subtribus 2. Eucrotoneæ. *Racemi v. spicæ terminales, androgyni v. rarius unisexuales. Flores ♂ sæpissime petaliferi. Filamenta apice primum inflexa antheris adnatis in alabastro reversis, in flore aperto sæpe erectis.*

84. **Croton.** Sepala æqualia v. rarius inæqualia, inappendiculata, valvata v. leviter imbricata. Ovarium perfecte 3-loculare v. casu 2–4-loculare.—*Utriusque orbis reg. calid., Amer. bor.*

85. **Julocroton.** Sepala inæqualia, imbricata, exteriora floris ♀ sæpius dorso glandulis v. appendiculis 1–3 aucta. Spicæ quam in *Crotone* densiores.—*Amer. trop.*

86. **Crotonopsis.** Sepala subæqualia, imbricata. Styli 2–3, sed ovarium jam abortu 1-loculare, 1-ovulatum.—*Amer. bor.*

87. **Eremocarpus.** Sepala subæqualia, imbricata. Ovarium 1-loculare, 1-ovulatum, stylo unico longo simplici.—*Amer. bor.*

Subtribus 3. Chrozophoreæ. *Spicæ racemi v. rarius paniculæ racemiformes, axillares rarius terminales v. ad apices ramorum paniculati. Flores ♂ sæpissime petaliferi. Filamenta recta v. summo apice inflexa, antheris jam in alabastro erectis.*

* *Petala fl. ♂ in corollam 5-lobam v. ore sinuatam connata. Cymulæ laxiusculæ secus rhachin paniculæ racemiformis pedunculatæ. Stamina ∞.*

88. **Givotia.** Sepala fl. ♂ valde imbricata. Discus integer v. sinuato-lobatus. Drupa indehiscens. Folia integra, 5–9-nervia.—*Ind. or.*

89. **Ricinodendron.** Sepala fl. ♂ valde imbricata. Disci glandulæ 5, magnæ, stamina cingentes. Drupa indehiscens. Folia digitata.—*Afr. trop.*

90. **Manniophyton.** Calyx fl. ♂ valvatim ruptus. Disci glandulæ 5, pilosæ. Capsula 3-cocca. Folia integra v. 3–5-loba.—*Afr. trop.*

91. **Pausandra.** Calyx fl. ♂ breviter sinuato-lobatus. Discus cupularis, integer. Stamina 5–7, antherarum loculis connectivo latiusculo introrsum adnatis. Capsula dura, 3-cocca. —*Amer. trop.*

** *Petala libera. Calyx imbricatus v. apertus, truncatus v. dentatus.*

92. **Trigonostemon.** Stamina 3 v. 5, antheris ad apicem columnæ centralis sessilibus. Styli 2-fidi. Capsula 3-cocca. Racemi axillares v. rarius terminales.—*Ind. or., Archip. Malay.*

93. **Paracroton.** Stamina 15–20, filamentis in columnam connatis. Styli 2-fidi. Capsulæ

cocci et semina latiora quam longa. Folia repando-serrata. Racemi terminales, longissimi. —*Java.*

94. Ostodes. Stamina in receptaculo convexo v. columnari 15–30, filamentis distinctis. Styli 2-partiti. Capsulæ cocci tardius dissilientes. Flores ♂ secus rhachin racemi cymulosi.—*Ind. or., Archip. Malay.*

95. Codiæum. Calyx parvus, appressus. Petala in fl. ♂ parva, in fl. ♀ 0. Stamina in receptaculo parum elevato 15–30, filamentis distinctis; antherarum loculi apice sæpius confluentes. Styli indivisi, subulati. Capsula 3-cocca. Racemi axillares, longi, tenues.—*Archip. Malay., Australia, ins. maris Pacifici.*

96. Baloghia. Calyx per anthesin patens v. reflexus. Petala longiora. Stamina in receptaculo convexo conico v. columnari 10–100; antherarum loculi distincti, paralleli. Styli alte 2–∞-fidi. Capsula 3-cocca. Racemi terminales breves laxi.—*N. Caledon., Australia.*

97. Alphandia. Calyx 5-dentatus. Petala longiora. Stamina in receptaculo conico ∞; antherarum loculi apice discreti. Styli 2–fidi. Capsula 3-cocca. Racemi terminales, longiusculi. —*Nova Caledonia.*

98. Fontainea. Calyx cyathiformis truncatus. Petala longiora. Stamina in receptaculo conico 25–30; antherarum loculi distincti, paralleli. Styli crassiusculi, indivisi. Drupa sæpius abortu 1-sperma, indehiscens. Racemi in axillis summis breves, laxi.—*N. Caledon., Australia.*

99. Blachia. Fl. ♂: Sepala imbricata. Disci glandulæ petalis æquilongæ. Stamina in receptaculo convexo 10–20, filamentis distinctis; antherarum loculi apice confluentes. Fl. ♀: Sepala post anthesin aucta foliacea v. rarius decidua. Styli 2-partiti. Capsula 3-cocca. Racemi terminales.—*Ind. or., China.*

100. Dimorphocalyx. Fl. ♀: Calyx breviter dentatus, petalis brevior. Stamina in receptaculo elevato v. columnari 10–20; antherarum loculi distincti. Fl. ♀: Calycis segmenta post anthesin valde aucta, foliacea. Styli 2-fidi. Capsula 3-cocca. Cymæ pauciflorae, axillares v. terminales.—*Ind. or., Archip. Malay.*

101. Sagotia. Fl. ♂: Sepala imbricata. Antheræ ultra 20, in receptaculo seriatim confertæ, subsessiles, loculis introrsum connectivo lato plano dissite adnatis. Fl. ♀: Sepala post anthesin valde aucta, patentia. Capsula loculicide 3-valvis. Racemi terminales.—*Brasilia bor., Guiana.*

102. Cluytia. Fl. ♂: Sepala imbricata. Discus petalifer margine inter petala glandulis v. squamellis auctus. Stamina 5, infra apicem columnæ centralis verticillata. Capsula septicide 3-valvis. Flores ad axillas fasciculati v. ♀ solitarii.—*Afr. austr.*

*** *Petala libera. Calyx ♂ valvatus. Capsula 3-cocca.*

† *Ovarii rudimentum in fl. ♂.*

103. Agrostistachys. Stamina 8–13, filamentis basi subconnatis; antherarum loculi a connectivo glandulifero penduli. Styli breves, crassiusculi, 2-fidi. Spicæ axillares.—*Ind. or., Afr. trop.*

104. Aegithamnia. Stamina 4–10 rarius ad 15, filamentis breviter v. alte connatis; antheræ dorsifixæ, loculis parallelis. Styli breves, patentes, laciniati. Calyx sub fructu sæpe auctus. Spicæ axillares.—*Amer. trop. et subtrop.*

105. Caperonia. Stamina 10 v. pauciora, in columna 2-verticillata, petalis ad basin columnæ supra calycem elevatis; antheræ variæ. Styli breves, lacero-multifidi. Herbæ suffruticesve sæpius hispidæ. Racemi axillares, floribus secus rhachin dissitis.—*Amer. et Afr. trop.*

106. Pseudocroton. Stamina 16–30, circa rudimentum columnare dense lepidotum; antheræ erectæ, demum recurvæ. Frutex lepidotus. Racemi ♂ pauciflori, ad apices ramorum subpaniculati.—*Amer. centr.*

†† *Ovarii in fl. ♂ rudimentum* 0.

107. Sumbavia. Petala parva. Stamina numerosa. Styli indivisi. Arbores indumento stellari. Folia ampla, 3-nervia. Racemi spiciformes, axillares.—*Penins. et Archip. Malay.*

108. Tannodia. Stamina 10, basi breviter connata. Styli 2-fidi. Frutex glaber. Folia lata, 3–5-nervia. Racemi tenues, terminales.—*Madagascaria.*

109. Crotonogyne. Stamina in receptaculo elevato crasso 15–20. Styli 2-partiti. Frutex indumento lepidoto. Racemi longi, axillares.—*Afr. trop.*

110. Chrozophora. Stamina 5–15, basi in columnam connata. Styli 2-fidi. Herbæ

stellato-tomentosæ v. hispidæ. Spicæ breves, in axillis superioribus sessiles, densæ.—*Reg. Mediterr. Afr. et As. trop.*

111. Speranskia. Petala brevia. Stamina 10–15, filamentis liberis; antherarum loculi subglobosi. Caulis herbaceus. Racemus terminalis.—*China bor.*

Subtribus 4. Adrianeæ. *Racemi v. spicæ omnes terminales, simplices. Flores apetali. Styli distincti v. basi brevissime connati. Capsula 3-cocca.*

* *Calyx ♂ sæpe coloratus, lobis imbricatis v. brevissimis.*

112. Manihot. Stamina 10; antheræ dorsifixæ. Styli patentes, vario dilatati. Folia sæpe lobata v. digitata. Racemi laxi. Flores majusculi.—*Amer. trop. imprimis Brasilia, in orbe vetere inquilina.*

** *Calyx ♂ in alabastro clausus, per anthesin valvatim fissus v. partitus.*

† *Ovarii in fl. ♂ rudimentum* 0.

113. Adriana. Stamina numerosa in receptaculo dense conferta; antheræ lineares, erectæ. Styli 2-fidi, fimbriati. Folia grosse dentata v. 3-loba.—*Australia.*

114. Pachystroma. Stamina 3, filamentis in columnam connatis; antheræ magnæ, dorsifixæ. Styli crassi, recurvi, indivisi. Folia spinoso-dentata.—*Brasilia.*

†† *Ovarii rudimentum in fl. ♂ praesens.*

115. Cephalocroton. Stamina 6–8, 2-seriata, filamentis bis flexis, antheræ dorsifixæ. Styli multifidi. Frutices indumento stellato. Flores ♂ ad apicem rhacheos in capitulum globosum conferti, ♀ ad basin racemi 1–2.—*Afr. trop.*

116. Adenochlæna. Stamina 4 (v. 5–6 ?) 1-seriata, filamentis erectis; antheræ dorsifixæ. Styli multifidi. Frutices v. arbores, indumento stellato v. glabrescentes. Fl. ♂ in capitulum v. spicam elongatam dispositi, ♀ ad basin rhacheos pauci.—*Ind. or.*

Subtribus 5. Acalypheæ. *Racemi v. spicæ axillares v. ad apices ramorum paniculati, sæpius tenues simplices v. ramosi, v. rarius ad fasciculos sessiles axillares reducti. Flores apetali. Calyx ♂ valvatim partitus v. fissus v. rarius lobis brevibus leviter imbricatis. Styli distincti v. basi brevissime connati, in speciebus perpaucis altius in columnam tenuem connati.*

* *Calyx ♂ in alabastro clausus (exceptis* Adenocline *et* Hasskarlia*). Antheræ 2–4-globosæ, loculis 2 distinctis parvis globosis v. 2-globosis.*

117. Bernardia. Stamina pauca v. numerosa; antheræ cruciatim 4-globosæ. Styli brevissimi, integri v. laceri. Capsula 3-cocca. Frutices rarius herbæ. Florum fasciculi rarius spicæ tenues ad axillas sessiles.—*Amer. trop. et subtrop.*

118. Erythrococca. Stamina pauca; antheræ 2-globosæ, loculis erectis. Styli plumoso-multifidi. Capsula abortu 1-locularis, 1-sperma, indehiscens. Frutex tenuis, aculeis infrastipularibus. Inflorescentia axillaris, fasciculata.—*Afr. trop.*

119. Hasskarlia. Stamina 3; antheræ 4-globosæ, loculis erectis. Disci hypogyni squamæ 3, subpetaloideæ. Styli plani in orbem subsessilem patentes. Capsula 3-cocca. Arbor v. frutex. Spicæ ♂ amentiformes, axillares v. laterales.—*Afr. trop.*

120. Claoxylon. Stamina sæpius numerosa; antherarum loculi 2, obovoidei v. globosi, erecti. Disci hypogyni squamæ 3 sæpe subpetaloideæ. Styli lineares, indivisi. Capsula 2–3-cocca. Arbores v. frutices. Spicæ axillares v. laterales, sæpius tenues.—*Afr., Asia et Australia trop., ins. maris Pacifici.*

121. Micrococca. Stamina 3–10; antheræ *Claoxyli.* Disci hypogyni laminæ 3, lineares. Styli breves, lineares, indivisi. Capsula 3–4-cocca. Herba foliis alternis. Racemi ♂ axillares, filiformes.—*Afr. et Asia trop.*

122. Mercurialis. Stamina 8–20; antherarum loculi subglobosi, divaricati. Disci hypogyni laminæ 2, lineari-subulatæ. Styli breves, indivisi. Capsula 2-cocca. Herbæ foliis oppositis. Racemi ♂ axillares tenues.—*Eur., Reg. Medit., Asia or., alibi inquilina.*

123. Leidesia. Stamina 4–7; antherarum loculi subglobosi, divaricati. Fl. ♀: Calyx 0 v. squamula minuta. Styli lineares, indivisi. Capsula 1–2-cocca. Herba tenera foliis alternis. Racemi filiformes, terminales.—*Afr. austr.*

124. ADENOCLINE. Stamina 6–12; antherarum loculi subglobosi, divaricati. Styli tenues, 2-partiti. Capsula 3-cocca. Herbæ teneræ, foliis alternis v. rarius oppositis. Inflorescentiæ axillares v. foliis floralibus diminutis in racemum terminalem abeuntes.—*Afr. austr.*

125. SEIDELIA. Stamina 2–3; antherarum loculi fere 2-globosi. Fl. ♀ calyx 3-fidus. Styli tenues, indivisi. Herba pumila, foliis alternis angustis. Florum fasciculi v. cymulæ axillares v. subterminales.—*Afr. austr.*

** *Calyx ♂ in alabastro clausus. Antherarum loculi sæpius stipitati, demum flexuosi, apice dehiscentes. Styli sæpius laceri v. plumosi.*

126. ACALYPHA. Stamina sæpissime 8. Fl. ♀ sæpius intra bracteam foliaceam sessiles, sepalis 3–4 parvis. Herbæ frutices v. arbores, habitu et inflorescentia variis.—*Utriusque orbis reg. calid.*

127. MAREYA. Stamina 10–20. Fl. ♀ bractea parva, sepala 4–6. Spicæ longæ, tenues.—*Afr. trop.*

*** *Calyx ♂ in alabastro clausus. Antherarum loculi oblongi, undique v. supra medium adnati, paralleli v. divergentes. Arbores fruticesve.*

† *Stamina sæpius pauca. Capsula 3-cocca.*

128. ADELIA. Stamina 8–15; antherarum loculi contigui, paralleli. Ovarii rudimentum in fl. ♂ 0. Styli laceri. Frutices rarius spinescentes. Flores ad axillas fasciculati.—*Amer. trop.*

129. LEUCOCROTON. Stamina 6–10; antherarum loculi contigui, paralleli. Ovarii rudimentum in fl. ♂ villosulum. Styli breves, crassi, sub-2-lobi. Indumentum breviter stellatum v. sublepidotum. Racemi axillares, breves.—*Cuba.*

130. CHLORADENIA. Stamina 3–5; antherarum loculi contigui, paralleli. Ovarii rudimentum in fl. ♂ angustum. Styli basi longiuscule connati, superne 2-partiti. Indumentum stellatum. Folia ampla, subpeltata. Racemi axillares, breves.—*Java.*

131. CŒLODEPAS. Stamina 4–5, filamentis crassis cuneatis connatis; antherarum loculi penduli v. divergentes. Ovarii rudimentum in fl. ♂ parvum. Styli patentes, complanati, 2-fidi. Arbores glabræ. Folia pennivenia. Spicæ ♂ ad axillas fasciculatæ, elongatæ.—*Ind. or., Java.*

132. BOCQUILLONIA. Stamina 2–3, filamentis basi connatis; antherarum loculi contigui, paralleli. Ovarii rudimentum in fl. ♂ 0. Styli lati, patentes, ovarii vertici appressi. Folia pennivenia. Flores ♂ minuti, in capitula globosa lateralia sessilia densissime conferta.—*Nov. Caled.*

133. ADENOPHÆDRA. Stamina 2–3, filamentis basi connatis; antherarum loculi a connectivo acuminato penduli. Ovarii rudimentum in fl. ♂ 0. Styli in discum ovarii vertici adnatum connati. Folia pennivenia. Spicæ ♂ tenues, simplices, axillares.—*Brasilia.*

134. CARYODENDRON. Stamina 4–6, circa discum crassum latum affixa; antherarum loculi contigui, paralleli. Flores ♀ ignoti. Arbores. Racemi longi, ad apices ramorum parce ramosi.—*Amer. trop.*

135. ALCHORNEA. Stamina 8 v. pauciora; antherarum loculi contigui, paralleli. Ovarii rudimentum in fl. ♂ 0. Styli lineares, sæpius indivisi. Folia pennivenia v. basi 3–5-nervia. Spicæ v. racemi tenues, axillares v. laterales, simplices v. paniculato-ramosæ.—*Utriusque orbis reg. calid.*

136. ALCHORNEOPSIS. Ovarii rudimentum in fl. ♂ 3-partitum. Cætera *Alchorneæ.*—*Brasil. bor., Guiana.*

137. LEPIDOTURUS. Stamina 8; antherarum loculi contigui, paralleli. Ovarii rudimentum in fl. ♂ 0. Styli 2-fidi. Folia 3–5-nervia. Spicæ ♂ amentiformes, laterales, sessiles, bracteis subimbricatis.—*Afr. trop., Madagasc.*

(Confer etiam 172, TRAGIÆ species paucas stylorum columna brevi.)

†† *Stamina numerosa rarissime infra 15. Ovarii rudimentum in fl. ♂ 0. Fructus varius.*

a. *Americanæ.*

138. CONCEVEIBA. Filamenta interiora elongata, flexuosa; antherarum loculi connectivo lato separati. Calyx ♀ extus basi glandulis magnis auctus. Styli crassi, retusi v. vix 2-fidi. Capsula magna, suberosa, 3-cocca. Racemi ♂ tenues ad apices ramorum paniculati, ♀ simplices floribus crasse pedicellatis.—*Amer. trop.*

139. Gavarretia. Fl. ♂ ignoti. Calyx ♀ truncatus, eglandulosus. Styli 2–4-fidi. Spica ♀ simplex, elongata, floribus sessilibus. Folia rigide coriacea.—*Brasilia bor.*

140. Lasiocroton. Filamenta recta; antherarum loculi contigui, paralleli. Calyx fl. ♀ patens, 5-fidus, eglandulosus. Styli breves, crassi, retusi v. brevissime fimbriati. Capsula 3-cocca. Habitus *Malloti*. Folia tomentosa, 3–5-nervia. Racemi axillares, ♂ breves densi, ♀ elongati laxi.—*Jamaica.*

b. *Gerontogeæ.*

141. Neoboutonia. Antheræ erectæ, filamentis brevissimis, loculis adnatis parallelis. Styli rigidi, 2-partiti. Fructus . . . Folia lata, 7–9-nervia. Racemi ♂ longi, tenues, ad apices ramorum paniculati.—*Afr. trop.*

142. Coelodiscus. Receptaculum disciforme in centro floris elevatum. Cætera *Malloti.*—*Ind. or.*

143. Podadenia. Antherarum loculi a connectivo acuminato penduli. Styli elongati, indivisi. Capsula globosa, carnosa, indehiscens, glandulis stipitatis densissime echinata. Folia penninervia.—*Zeylania.*

144. Trewia. Antherarum loculi paralleli, contigui. Styli longe lineares, indivisi. Capsula carnosa, 2–4-locularis, indehiscens v. loculicide 2–4-valvis. Folia 3–5-nervia.—*Ind. or.*

145. Coccoceras. Capsula depressa, 3-angulata v. 3-cornuta, loculicide dehiscens. Cætera *Malloti.*—*Malay. Penins. et Archip.*

146. Mallotus. Antherarum loculi paralleli, contigui v. connectivo late sejuncti. Styli indivisi, sæpius fimbriati. Capsula 2–3-cocca. Folia alterna rarissime opposita, nunc peltata v. 3–7-nervia, interdum 3-loba, nunc integerrima penninervia. Spicæ v. racemi simplices v. paniculato-ramosæ, axillares v. ad apices ramorum paniculatæ.—*Asia trop. et Australia, in Afr. trop. pauca.*

**** *Calyx in alabastro clausus. Antheræ sæpissime 4-locellatæ.*

147. Cleidion. Stamina ultra 20. Styli longi, 2-fidi. Capsula 2–3-cocca. Habitus et inflorescentia *Malloti.*—*Amer., Afr. et Asia trop.*

148. Macaranga. Stamina pauca v. numerosa. Styli sæpius breves, patentes, indivisi. Capsula nunc 2-cocca nunc 1-cocca, tardius v. vix dehiscens. Folia peltata v. 3–7-nervia, interdum lobata rarius penninervia. Racemi v. spicæ sæpius paniculati nunc ramosissimi, laterales v. terminales.—*Asia et Afr. trop., ins. maris Pacifici.*

***** *Calyx ♂ in alabastro clausus. Stamina numerosissima, filamentis repetito-ramosissimis, antheris 2-globosis. Capsula 3-cocca.*

149. Ricinus. Calyx ♀ spathaceo-fissus. Caulis elatus, herbaceus. Folia palmatim 7-∞-loba. Racemi ad apices ramorum subpaniculati, floribus majusculis.—*Utriusque orbis reg. calid. sed sæpe inquilina.*

150. Homonoia. Sepala fl. ♀ angusta, imbricata. Frutices foliis angustis v. parvis penniveniis. Spicæ axillares, densifloræ v. abbreviatæ.—*Ind. or., Archip. Malay.*

****** *Calyx ♂ breviter lobatus v. subimbricatus jam ante anthesin apertus.*

151. Cheilosa. Calyx ♂ 5-partitus. Stamina 5–10; antherarum loculi breves connectivo disjuncti. Ovarii rudimentum in fl. ♂ obtusum v. 3-fidum. Styli apice 2-fidi. Capsula 3-cocca. Folia penninervia. Racemi ♂ laxi, axillares v. laterales, tenues, foliis breviores.—*Java.*

152. Endospermum. Calyx ♂ 4-dentatus. Stamina 6–10; antherarum loculi didymi, 4-valves. Styli in discum planum connati. Fructus didymus, in coccos indehiscentes secedens. Folia lata, 3–5-nervia. Racemi axillares lateralesque, utriusque sexus longiusculi.—*Archip. Malay., China austr.*

153. Cephalomappa. Calyx ♂ turbinatus, breviter 2–5-fidus. Stamina 2–4. Styli basi connati, superne recurvo-patentes, incisi v. 2-fidi. Folia penninervia. Racemi axillares, breviter paniculati; fl. ♂ in capitula globosa moriformia dense conferti, ♀ solitarii.—*Borneo.*

(Vide etiam 119, Hasskarliam; et 124, Adenoclinem.)

Genera non satis nota.

154? Cladogynos. Calyx ♂ coloratus, 2–3-partitus. Stamina 4, filamentis basi connatis. Styli ramosi, glanduloso-plumosi. Folia subpeltata, sub-3-loba. Flores ♂ capitato-congesti, ♀ longe pedicellati, calyce foliaceo 6-fido.—*Archip. Malay.*

155? CALPIGYNE. Calyx ♂ rotatus, 4-fidus. Stamina 4, filamentis basi connatis. Styli 2-fidi, eroso-lacerati. Folia oblonga, integerrima v. serrulata. Spicæ filiformes, floribus ♂ glomeratis.—*Celebes, Borneo.*

156? COCCONERIUM. Flores ♀ ad axillas solitarii et cum foliis verticillati, sepalis 5 valvatis. Styli bis terve 2-fidi. Capsula 3-cocca.—*Nov. Caled.*

Subtribus 6. Geloniеæ. *Spicæ v. glomeruli rarius racemi axillares v. oppositifolii. Flores apetali. Calyx ♂ valde imbricatus. Stamina* ∞, *centralia. Styli plus minus 2-fidi et (excepto* Erismantho) *distincti v. vix basi connati.*

157. CHÆTOCARPUS. Stamina 5–20, filamentis in columnam alte connatis. Ovarii rudimentum in fl. ♂ 3-fidum. Styli 2-partiti. Capsula echinato-setosa v. tuberculata, 3-cocca. Folia alterna, coriacea. Florum glomeruli axillares, densi.—*Asia et Amer. trop.*

158. METTENIA. Stamina (7?), filamentis in columnam alte connatis. Styli 2-partiti. Capsula tuberculoso-echinata, in valvas 2-partitas dissiliens, seminibus in columella diu persistentibus. Folia alterna. Florum glomeruli in axillis superioribus sessiles, racemum terminalem basi foliatum formantes.—*Ind. occid.*

159. GELONIUM. Stamina 10–60, filamentis liberis; antheræ dorsifixæ. Styli breves, patentes, brevissime 2-fidi v. laceri. Fructus globoso-sub-3-queter, vix tardius dehiscens. Folia alterna. Florum fasciculi v. glomeruli oppositifolii. —*Asia calid., Africa trop. et austr.*

160. BALIOSPERMUM. Stamina 10–60, filamentis liberis; antheræ terminales, loculis adnatis. Styli breves, crassi, recurvi, 2-fidi. Capsula 3-dyma, 3-cocca. Folia alterna, sæpius dentata v. sublobata. Racemi axillares, breves densique v. longi laxi v. subpaniculati.—*Ind. or., Archip. Malay.*

161? PHYLLOBOTRYUM. Stamina 20–50, filamentis liberis apice dilatatis; antherarum loculi divaricati, demum transversim 2-valvati. (Fl. ♀ ignoti). Folia alterna. Racemi ♂ breves, folii costæ adnati, pauciflori.—*Africa trop.*

162. ERISMANTHUS. Stamina ad 12, filamentis liberis; antheræ erectæ, loculis adnatis. Sepala ♀ magna, foliacea. Styli basi in columnam tenuem connati, superne patentes 2-fidi. Folia opposita, subsessilia, oblique cordata. Spicæ ♂ ad axillas sessiles, amentiformes. Fl. ♀ solitarii, pedunculati.—*Penang.*

Subtribus 7. Plukenetieæ. *Spicæ v. racemi axillares v. rarius subterminales. Flores apetali. Calyx ♂ valvatus*; ♀ *imbricatus v. reduplicato-valvatus (exceptis* Tragiis *paucis). Stylus cum ovario continuus, elongatus v. crassus cavusque, sæpius carnosus, apice breviter nunc brevissime lobatus.*

* *Frutices v. arbores erecti, foliis sæpius amplis ad apices ramorum confertis, rarius sparsis.*

163. EPIPRINUS. Stamina 8–15, filamentis superne inflexis; antheræ magnæ, dorsifixæ, erectæ. Calycis ♀ segmenta 5–6, reduplicato-valvata, demum valde aucta, foliacea, squamulis totidem exterioribus alterna. Stylus longe columnaris. Spicæ v. racemi terminales et in axillis summis, floribus ♀ in parte inferiore.—*Malacca.*

164. PYCNOCOMA. Stamina numerosa, filamentis in alabastro sæpius flexuosis; antheræ terminales, parvæ. Sepala ♀ imbricata. Stylus longe columnaris. Racemi in axillis superioribus, floribus ♀ sæpe terminalibus.—*Afr. trop.*

165. RAMELIA. Stamina 2–3, filamentis incurvis. Sepala ♀ imbricata. Stylus superne infundibularis. Spicæ unisexuales, laterales et terminales.—*Nov. Caled.*

166. ASTROCOCCUS. Stamina 4 (v. 6–8?) filamentis erectis; antheræ basifixæ. Sepala ♀ imbricata. Ovarii loculi et capsulæ cocci stellato-patentes. Stylus oblongus, apice cavus. Racemi graciles, axillares v. laterales, floribus ♀ in parte inferiore cum uno sæpe terminali.—*Brasil. bor.*

167. ANGOSTYLIS. Stamina 15–25, receptaculo fere columnari, filamentis brevibus; antheræ basifixæ. Sepala ♀ imbricata. Styli columna cava, suburceolata. Capsula 3-dyma, urceolo stylari coronata, 3-cocca. Flores majusculi, ♂ ad nodos 2–3-ni, pedicellati, ♀ axillares, solitarii, longe pedicellati.—*Brasil. bor.*

** *Caules volubiles v. alte scandentes v. herbacei breviterque ascendentes, in speciebus perpaucis laxe arborescentes.*

168. SPHÆROSTYLIS. Stamina 3, filamentis in columnam connatis; antheræ erectæ. Sepala

♀ vix imbricata. Stylus globosus. Frutex scandens. Racemi spiciformes, axillares terminalesque.—*Madagascaria.*

169. PLUKENETIA. Stamina 8–30, toro convexo globoso v. elongato affixa; antheræ erectæ. Sepala ♀ imbricata. Ovarium sæpe 4-loculare. Stylus globosus v. cylindraceus. Frutices suffruticesve volubiles v. scandentes (excepta *P. conophora*). Racemi axillares v. laterales.—*Utriusque orbis reg. calid.*

170. ACIDOTON. Stamina numerosa, toro elevato carnoso affixa; antheræ erectæ. Sepala ♀ imbricata. Styli columna crassa. Arbuscula laxe ramosa, pilis urentibus. Flores axillares, ♂ pedicellati fasciculati, ♀ secus rhachin spicæ subsessiles.—*Jamaica.*

171. PLATYGYNE. Stamina 4–8, sæpius 5; antheræ ovatæ. Sepala ♀ imbricata. Styli columna crassa. Frutex volubilis, pilis urentibus. Folia angusta. Flores subterminales v. laterales, ♂ pedicellati fasciculati, ♀ sessiles solitarii v. gemini.—*Cuba.*

172. TRAGIA. Stamina 3 v. pauciora, rarius ∞; antheræ ovatæ v. oblongæ. Sepala ♀ imbricata, interdum pinnatifida. Styli in columnam interdum tenuem v. brevem connati, apice liberi indivisi. Herbæ suffruticesve scandentes v. volubiles, rarius caulibus breviter ascendentibus. Pili sæpe urentes. Racemi terminales oppositifolii v. axillares. Flores sæpe dissiti, inferiores ♀.—*Utriusque orbis reg. calid., Afr. austr., Amer. bor.*

173. CNESMONE. Stamina 3, filamentibus brevibus crassis, antherarum connectivum ultra loculos productum. Calycis ♀ segmenta 3, vix imbricata. Styli carnosi basi in massam brevem latam connati. Frutex alte scandens villosus. Inflorescentia *Tragiæ.—Ind. or., Archip. Malay.*

174. DALECHAMPIA. Stamina sæpius 20–30, toro convexo v. columnari affixa. Calyx ♀ 5–12-partitus. Stylorum columna longa carnosa. Frutices suffruticesve volubiles alte scandentes v. rarius suberecti. Racemi sæpius in capitula axillaria contracti, bracteis 2 magnis sæpe coloratis involucrati, v. rarius basi laxe bracteati.—*Utriusque orbis imprimis Americæ reg. calid.*

(*Hippomaneæ* plurimæ, imprimis generum polyandrorum, stylum *Pluketieticarum* ostendunt, et stylus basi tenuiter columnaris est in speciebus paucis *Acalyphearum.*)

Subtribus 8. Hippomaneæ. *Spicæ v. racemi axillares v. terminales, interdum paniculati. Flores apetali. Calyx ♂ parvus, jam ante anthesin apertus, nunc minimus v. 0. Stylus varius, nunc columnaris apice ramosus, nunc a basi in stylos distinctos divisus.*

* *Bracteæ flores subtendentes nudæ v. sæpe 2-glandulosæ.*

† *Stamina* ∞ (6–50, *rarissime pauciora*), *filamentis* (*excepta* Trisyngyni) *brevissimis.*

175. MABEA. Calyx ♂ 5-lobus. Ovarium 3-loculare. Styli in columnam longam alte coaliti, superne tenues indivisi. Capsula 3-cocca. Racemi terminales, floribundi, sæpe compositi, floribus ♀ ad basin racemi paucis.—*Amer. trop.*

176. HOMALANTHUS. Calyx ♂ compressus, late 2-partitus. Antherarum loculi breves, divaricati, vertice 2-valvatim dehiscentes. Ovarium sæpius 2-loculare. Styli distincti, lineares, indivisi. Capsula carnosa, indehiscens v. vix demum in coccos dorso 2-valves secedens. Racemi terminales, indivisi, floribus ♀ ad basin racemi paucis.—*Archip. Malay., ins. Pacif., Australia.*

177. PIMELEODENDRON. Calyx ♂ compressus, late brevissimeque 2-fidus. Antheræ terminales, latæ, truncatæ, loculis divergentibus extrorsum adnatis. Racemi laterales v. subaxillares. (Fl. ♂ soli noti).—*Archip. Malay.*

178. SENEFELDERA. Calyx ♂ breviter lateque 3–5-lobum. Ovarium 3-loculare. Styli basi in columnam brevem crassam coaliti, superne recurvo-patentes crassiusculi indivisi. Capsula 3-cocca. Spicæ ad apices ramorum paniculatæ.—*Brasilia.*

179. TRISYNGYNE. Calyx ♂ tubulosus, 4–5-dentatus. Filamenta subulata; antheræ lineares. Ovarium 2-loculare. Stylus columnaris, apice 2-lobus.—*Nov. Caled.*

†† *Stamina* 1–2, *rarius* 3 (*in* Actinostemone ∞).

a. *Sepala ♂ 4–5, lata, valde imbricata.*

180. OMPHALEA. Staminum columna brevissima, apice filiformi-dilatata, 2–3-loba; antherarum loculis margini loborum adnatis. Ovarium 3-loculare; stylus columnaris, obtusus v. brevissime 3-lobus. Frutices scandentes. Panicula terminalis.—*Amer. trop., Madagasc.*

b. *Calyx ♂ breviter sæpius brevissime lobatus.*

181. Ophthalmoblapton. Stamen 1, e fundo calycis exsertum. Ovarium 3-loculare; stylus columnaris, superne crassus, breviter 3-lobus. Capsula 3-cocca. Arbores. Spicæ ♂ breves et flores ♀ axillares v. laterales.—*Brasilia.*

182. Hippomane. Stamina 2, in columnam connata. Ovarium 6–9-loculare; styli basi connati, superne stellato-patentes, recurvi, indivisi. Drupa ∞-locularis, indehiscens. Arbor. Spicæ terminales, rhachi crassa.—*Amer. trop. maritim.*

183. Maprounea. Filamenta alte connata. Ovarium 3-loculare; styli alte connati, superne breviter patentes, indivisi. Capsula 3-cocca. Frutices. Spicæ densæ, capituliformes, ovoideæ v. subglobosæ.—*Amer. et Afr. trop.*

184. Stillingia. Filamenta libera. Ovarium 2–3-loculare; styli basi breviter connati, indivisi. Capsula 2–3-cocca, columella nulla, receptaculo tamen post coccos delapsos persistente indurato patentim 2–3-cornuto. Frutices. Spicæ terminales. Bracteæ 2-glandulosæ.—*Amer. bor. et austr., ins. Mascar. et maris Pacifici.*

185. Sapium. Filamenta libera. Ovarium 2–3-loculare. Styli liberi v. basi breviter connati. Capsula demum loculicide dehiscens, seminibus sæpissime diu in columellam persistentibus. Arbores fruticesve. Spicæ v. racemi terminales, simplices v. paniculatæ. Bracteæ sæpe 2-glandulosæ.—*Utriusque orbis reg. calid.*

186. Bonania. Filamenta libera. Ovarium 2-loculare. Styli liberi v. basi breviter connati. Capsula in valvas 3 2-partitas dehiscens. Fruticuli, spicis racemulisve axillaribus (rarius terminalibus?) tenuibus brevibus.—*Cuba.*

c. *Calyx ♂ a basi 3-partitus, rarius alte 3–5-fidus.*

187. Ditta. (Fl. ♂ ignoti.) Ovarium 2-loculare, stylis brevissimis crassis 2-lobis. Habitus *Bonaniæ.* Fructus 2-coccus *Excæcariæ.*—*Cuba.*

188. Sebastiania. Calyx ♂ quam in *Excæcaria* sæpius magis evolutus. Semina strophiolata. Frutices tenues v. herbæ. Racemi v. spicæ terminales v. simul axillares v. laterales. Cætera *Excæcariæ.*—*Amer. trop. et subtrop. et Afr. trop. occid., una specie Asia et Afr. trop.*

189. Excœcaria. Filamenta libera. Styli basi breviter connati, indivisi. Capsula in coccos 2-valves v. vix dehiscentes dissiliens, columella persistente. Semina estrophiolata. Arbores fruticesve. Racemi v. spicæ axillares laterales v. rarius terminales.—*Asia, Australia, Afr. trop. et subtrop.*

(Confer etiam 72, Tetrorchidium, antheris 4-valvibus sepalis oppositis.)

d. *Calyx ♂ rudimentarius v. sæpius omnino deficiens.*

190. Gymnanthes. Stamina 2–3, filamentis liberis v. vix basi connatis. Ovarium 3-loculare. Styli liberi v. brevissime connati, indivisi. Capsula 3-cocca, columella persistente. Frutices. Racemi v. spicæ axillares, rarius simul terminales.—*Ind. occid., Amer. trop.*

191. Actinostemon. Stamina ∞ rarius 3, filamentis liberis. Ovarium 3-loculare. Styli basi v. alte in columnam tenuem connati, superne recurvo-patentes, indivisi. Capsula 3-cocca, columella persistente. Frutices. Racemi terminales v. axillares e gemmis squamatis oriundi.—*Amer. trop.*

192. Adenopeltis. Habitus, spicæ terminales, receptaculum post coccos delapsos divaricato-cornutum, cæterique characteres *Stillingiæ*, excepta calycis deficientia.—*Chile.*

193. Colliguaja. Stamina 2–3, filamentis brevibus. Styli basi breviter connati, crassiusculi, indivisi. Capsula 3-cocca, columella persistente. Habitus *Stillingiæ* et *Adenopeltidis*, sed flores ♂ plures pedunculo communi bracteæ adnato florem polyandrum simulant.—*Amer. austr. extratrop.*

194. Dalembertia. Stamen 1. Styli basi in columnam connati, superne patentes indivisi. Capsula 3-cocca, columella persistente. Suffrutices foliis sæpius repando-dentatis lobatisve. Racemi terminales.—*Mexico.*

** *Bracteæ membranaceæ margine toto rhachi adnatæ alabastra juniora includentes, per anthesin irregulariter ruptæ v. fissæ.*

195. Hura. Calyx ♂ cupulatus truncatus. Stamina 8–20, antheris in columna sessilibus 2–4-verticillatis. Ovarium 5–20-loculare. Styli in columnam carnosam alte connati, apice

patentes indivisi. Capsula magna, depressa, ∞-cocca, crepitanter dissiliens. Arbores. Spicæ oblongæ, terminales, pedunculatæ.—*Amer. trop., in orbe vetere inquilina.*

196. ALGERNONIA. Sepala ♂ 3, imbricata. Stamen 1. Ovarium 3-loculare. Styli in columnam alte connati, superne patentes. Capsula 3-cocca, transversim angulata v. alata. Frutices. Spicæ terminales, tenues.—*Brasilia.*

*** *Bracteæ in involucrum sæpius globosum, junius clausum, per anthesin hians v. valvatim fissum, flores ∞ includens, connatæ.*

197. PERA. Calyx ♂ valvatus v. rudimentarius v. 0. Stamina 2–6. Ovarium 3-loculare. Stigma peltatum, subsessile. Capsula in valvas 2-fidas dehiscens. Arbores fruticesve. Involucra ad axillas glomerata.—*Amer. trop.*

GENERA EXCLUSA V. DUBIA.

ADELANTHUS, Endl., ab auctore Gen. Suppl. ii. 30 sub *Antidesmeis* collocatus, est *Pyrenacantha*, Hook., inter **Olacineas** *Phytocreneas*.

ADENOCHETON, Fenzl in Flora, 1844, 312, nomen tantum (ADENOCHETUS, Baill. Etud. Euph. 653 ad specimen ♂ descriptus) est *Cocculus Leæba*, DC., inter **Menispermaceas**.

ANTITAXIS, Miers, est genus *Menispermacearum* valde anomalum, a nobis supra i. 33 dubie ad *Euphorbiaceas* relatum, sed postea rite ab auctore ipso et in Hook. Fl. Ind. i. 106 ad **Menispermaceas** restitutum.

ASPIDANDRA, Hassk. Hort. Bogor. Descr. 47, est planta in horto Bogoriensi culta, sub nomine *Ryparia cæsiæ*, sed ex descriptione auctoris a specie Blumeana diversa. Specimen nostrum folia tantum præbet glaberrima, pilis malpighiaceis a Blumeo et Muellero in *Ryparia cæsia* memoratis omnino deficientibus. Genus cæterum, floribus ♀ ignotis, valde obscurum remanet.

ATERAMNUS, P. Br. Hist. Jam., est species imperfecte descripta, nequaquam agnoscenda, et nomen delendum.

CALLITRICHE, Linn., a Baillono ad *Euphorbiaceas* relata, supra, i. 676, inter **Halorageas** recensetur.

DOVYALIS, E. Mey., a Lindleyo sub *Euphorbiaceis* enumerata, est **Bixinea**, supra, i. 128.

ELÆOCOCCA, Miq. Fl. Ind. Bat. Suppl. 460; arbor Sumatrana alternifolia, inflorescentia paniculata, floribus ignotis, quoad genus dubia remanet. Calyx fructifer 5-partitus dicitur, lobis acutis dorso inferne gibboso-incrassatis. Baccæ crasso-coriaceæ, sublignosæ, duræ, globosæ, 3-coccæ, loculis 1-spermis.

FORESTIERA, Poir. (BORYA, Willd.; BIGELOWIA, Sm.) a Lindleyo sub *Scepaceis* enumerata, est **Oleacea**, supra, ii. 676.

GARRYA, Dougl., ab Endlichero, Gen. Pl. 288 ad *Antidesmeas* dubias associata, et GRISELINIA, Forsk., a Sprengelio Pug. Pl. i. 63 in *Tricoccis* posita, sub **Cornaceis** recensentur supra, i. 951.

HEXADICA, Lour. Fl. Cochinch. 562, ex ordine evidenter excludenda est, sed genus imperfecte descriptum valde incertum et nomen delendum.

LASCADIUM, Rafin. Fl. Ludov. 114, genus ex schedis Robinianis pessime definitum, est verisimiliter planta sub alio quodam ordine jam nota et nomen delendum.

LOPADOCALYX, Klotzsch in Pl. Preiss. i. 178, est *Olacis* species inter **Olacineas**, supra, i. 347.

LUNASIA, Blanco, ab Endlichero Gen. Suppl. 1425 *Euphorbiaceis* adscripta, est ut rite indicavit Muell. Arg. **Rutacearum** genus, idem ac *Rabelaisia*, Planch., supra i. 299, et nomen Blancoi Planchoniano substituimus supra, i. 991.

LUNTIA, CINOGASUM, AROTON et BRUNSVIA, Neck. Elem. ii. 335 ad 337, genera a *Crotone*, Linn., CRATOCHWILIA, Neck. l. c. 339 a *Cluytia*, Linn., et BROMFELDIA, Neck. l. c. 347, a *Jatropha*, Linn., separata, sunt verisimiliter jam sub aliis nominibus nota, sed characteribus pessimis agnoscere nequimus, et omnino prætermittenda sunt.

MAINEA, Vell., ab Endlichero, Gen. Pl. 1125, *Euphorbiaceis* adscripta, est *Trigonia*, Aubl., inter **Vochysiaceas**, supra, i. 977.

MARGARITARIA, Linn. f. Suppl. 66, quoad plantam sic dictam masculam in herbario servatam, est *Combretacea*, planta fœmina videtur *Phyllanthus antillanus*, Muell. Arg. (*Cicca antillana*, Juss.). Character Linneanus neutri bene convenit et nomen suum tam genericum quam specificum delendum est.

MOACURRA, Roxb., a Muellero in Prodromo sub *Euphorbiaceis* descripta, est *Chailletia* species

inter **Chailletiaceas**, supra, i. 341. Baillon *Chailletiaceas* omnes in *Euphorbiaceis* includit, nobis tamen ordinem bene remotum constituere videntur.

MONOSPORA, Hochst. in Flora, 1841, 660, est *Trimeria*, Harv., inter **Bixaceas**, supra, i. 129.

MYTILOCOCCUS, Zoll. in Miq. Fl. Ind. Bat. i. ii. 387, sub *Euphorbiaceis* descriptus, est, ut rite indicavit Muell. Arg., *Lunasia*, Blanco inter **Rutaceas**, supra, i. 991.

ODONTOCARYAM, Miers, genus **Menispermacearum**, olim ex ordine rejecimus et dubie ad *Euphorbiaceas* retulimus ob flores ♀ a Miersio descriptos ad *Jatropham* pertinentes. Cfr. supra, i. 960.

PAYERIA, Baill. Adans. i. 50, t. 3, est evidenter *Quivisia*, Cav., inter **Meliaceas**, supra, i. 330. *P. chrysogyne*, Muell. Arg. a Baillono Hist. Pl. v. 239 sub *Payeria* inter *Euphorbiaceas* recepta, ab eo tardius ibid. v. 495 ad *Quivisiam* refertur, et speciei typicæ, *P. excelsæ*, Baill., icon et descriptio ad amussim cum *Quivisia decandra*, Cav., conveniunt, antheris a tubo stamineo jam delapsis v. ab auctore prætermissis.

PENNANTIA, Forst., a Bartlingio Ord. Nat. 372 inter genera minus cognita *Euphorbiacearum* admissa, est **Olacinea**, supra, i. 351.

PERIPTERYGIUM, Hassk. Cat. Hort. Bogor. 234, est *Cardiopteris*, Wall., supra i. 355 pro genere anomalo **Olacinearum** descripta. Nuperius tamen Beccari in nota in Nuov. Giorn. Bot. Ital. ix. 100, genus ex *Olacineis* recto jure excludit et ad *Gamopetalas* transfert; dein *Convolvulaceis Borragineis*que comparat, ab utroque tamen ordine *Cardiopteris* pluribus notis recedit, imprimis ovuli situ et embryone. Affinitates adhuc valde dubiæ remanent, ab *Euphorbiaceis* certe remotæ.

PHYLLOXYLON, Baill. Adans. ii. 54, frutex Mauritianus, habitu *Phyllanthi* sect. *Xylophylli*, floribus ♂ 6-meris 6-andris, ♀ ignotis, generis et affinitatis dubia remanet. Muell. Arg. in DC. Prod. xv. ii. 1256 quærit an *Santalacea?* ubi *Exocarpus* habitum subsimilem præbet, sed character non convenit.

PLAGIOPTERON, Griff., a Lindleyo Veg. Kingd. 282, *Euphorbiaceis* dubiis additum, est **Tiliacea**, supra i. 238.

PRÆTORIA, Baill. Etud. Euph. 470, t. 11, f. 14, est *Pipturi* species inter **Urticaceas**, infra.

PYRENACANTHA, Hook. Bot. Misc. ii. 107, ab auctore dubie *Stilagineis* adscripta a Baillono in DC. Prod. xvii. 18 rite ad **Olacineas** (*Phytocreneas*) refertur, a nobis olim errore ad *Santalaceas* relata.

RYPAROSA, Blume, Bijdr. 600 (RYPARIA, ex Auct. emend. in Fl. Jav. Præf. 8; RHYPARIA, ex emend. Hassk. Cat. Hort. Bogor. 239) est genus non satis notum, verisimiliter ex ordine excludendum, ob petala lanceolata valvata basi intus squamula lanata aucta. Ex Muell. Arg. in DC. Prod. xv. ii. 1260 species continet duas inter se non congeneres.

TETRAGYNE, Miq. Fl. Ind. Bat. Suppl. 463, floribus ♂ et fructibus ignotis, quoad genus valde dubium remanet. Frutex est v. arbor Sumatrana, foliis breviter petiolatis semipedalibus membranaceis. Flores ♀ ad axillas solitarii, breve pedicellati. Sepala 5, imbricata. Ovarium 4-loculare, loculis 1-ovulatis. Stigmata 4, linearia, reflexa. An *Alchorneæ* (*Stipellariæ*) species?

TRIBUS I. EUPHORBIEÆ.

1. **Pedilanthus**, *Neck. Elem.* ii. 354. (Crepidaria, *Haw. Syn. Pl. Succul.* 136.)—Involucrum irregulare, obliquum, declinatum v. calceiforme v. subæqualiter urceolatum, postice appendice polymorpha interdum ampla colorata auctum, ore breviter 5-fido v. denticulato; glandulæ in fundo appendicis 2–6 v. 0. Flores ♂ in involucro ∞, pedicellati. Perianthium 0. Stamen 1, filamento brevi cum pedicello articulato; antherarum loculi distincti, subglobosi. Fl. ♀ in centro involucri 1. Perianthium e squamellis 3 minutis v. 0. Ovarium ad apicem pedicelli sessile, 3-loculare; styli in columnam longiusculam connati, apice breviter liberi, integri v. 2-fidi; ovula in loculis solitaria. Capsula in coccos sæpe carinatos v. cornutos 2-valves a columella persistente elastice dissiliens. Semina albuminosa, cotyledonibus latis.—Frutices ramis sæpe carnosis. Folia caulina alterna, integerrima, floralia sæpius opposita. Involucra viridia v. colorata, in cymas dichotomas terminales v. axillares disposita. Bracteolæ intra involucrum sub floribus ♂ lineari-setaceæ v. sæpe obsoletæ.

Species editæ 15, nonnullæ tamen non satis notæ, Americæ tropicæ a Brasilia boreali usque ad Mexicum et Indiam occidentalem incolæ. *Boiss. in DC. Prod.* xv. ii. 4, 1261. *Poit. in Ann. Mus.*

Par. xix. *t.* 19. *Jacq. Hort. Schœnbr. t.* 276 (*Euphorbia*). *Benth. Bot. Sulph. t.* 23. *Muell. Arg. in Mart. Fl. Bras.* xi. ii. *t.* 98. *Bot. Mag. t.* 2514 (*Euphorbia*). *Bot. Reg. t.* 837.

Genus *Euphorbiæ* sectioni *Poinsettiæ* arcte affine. Involucri forma variat de specie in speciem, in *P. Finkii* appendix maxima calceiformis, in *P. lineariformi* obliqua et late scutelliformis, in *P. macrocarpa* lata, 3-cuspidata, in aliis speciebus ad gibbum obtusum reducta, sed characteres ad sectiones distinctas separandas haud invenimus. Klotzsch et Garcke in Abhandl. Akad. Berl. 1859. genera 15 proposuerunt ad numerum glandularum distincta: PEDILANTHUS, glandulis 4, HEXADENIA, glandulis 6, et DIADENARIA, glandulis 2, characteres non majoris valoris quam formæ appendicis, *P. linearifolia* differt etiam floribus ♀ squamis perianthii 3 distincto munitis.

2. **Euphorbia,** *Linn. Gen. n.* 609. (Tithymalus, *Gærtn. Fruct.* ii. 115, *t.* 107.)— Involucrum calyciforme, regulare v. vix obliquum, campanulatum v. turbinatum, sæpius herbaceum, lobis 4–5 rarius 6–8 membranaceis brevibus integris v. laceris, intra glandulas sæpe occultis; glandulæ totidem v. rarius pauciores, extra lobos iis alternæ, sæpius latæ patentesque, integræ 2-cornutæ v. divisæ, dorso appendicula petaloidea auctæ v. nudæ. Flores ♂ in involucro ∞, pedicellati. Perianthium 0 v. rarius squamella ad articulationem minuta. Stamen 1, filamento brevi cum pedicello articulato; anthera erecta, loculis distinctis sæpius subglobosis divaricatis longitudinaliter dehiscentibus. Flos ♀ in centro involucri 1, pedicello demum elongato ex involucro exsertus. Perianthium 0 v. e segmentis 3 minutis. Ovarium ad apicem pedicelli sessile, 3-loculare; styli 3, distincti v. plus minus coaliti, apice patentes indivisi v. 2-fidi, lobis apice v. introrsum stigmatosis; ovula in loculis solitaria. Capsula in coccos 2-valves a columella persistente dissiliens, endocarpio cartilagineo v. duro. Semina albuminosa, cotyledonibus latis planis.—Herbæ suffrutices v. frutices habitu vario, succo sæpissime acrido lactescente, caule nunc crasso carnoso subaphyllo nunc herbaceo v. lignoso. Folia inferiora v. omnia alterna v. superiora v. omnia opposita, indivisa, integerrima v. rarius dentata. Involucra (olim cum floribus inclusis pro flore hermaphrodito polyandro habita) in cymam terminalem disposita v. in axillis foliorum v. in dichotomiis solitaria subcymosa v. fere racemosa. Bracteæ sub cyma v. sub involucris oppositæ; bracteolæ intra involucrum, ad normam sub floribus ♂ lineares v. setaceæ, interdum vero interiores v. fere omnes desunt v. inferiores in bracteas pauciores laceras pone fasciculos florum iisque basi cohærentes connatæ.

Species ultra 600, in regionibus temperatis utriusque orbis latissime dispersæ, inter tropicos pauciores. *Boiss. in DC. Prod.* xv. ii. 8, *et Ic. Euph. Parisiis*, 1866, *cum tabb.* 121. *Muell. Arg. in Mart. Fl. Bras.* xi. ii. 667, *t.* 92 *ad* 97. *Benth. Fl. Austral.* vi. 44. *Kurz For. Fl. Brit. Burm.* ii. 415.

Genus a Boissiero optime elaboratum 'vastissimum et naturalissimum, ideo in sectiones recte definitas difficillime distribuendum. Characteres quibus series sectionum innitantur non satis graves, nec exceptionibus immunes, meliores tamen deficiunt.' Boissier sectiones 26 proposuit, quibus unam addidit Muell. Arg., nonnullæ tamen species unicæ sunt charactere unico anomalæ, aliæ e speciebus paucis confectæ inter se quam maxime dissimilibus, majores vero etsi vix limitibus certis definitæ pro maxima parte haud difficile recognoscendæ. Characteres tamen e glandularum forma quibus Klotzsch et Garcke genera plura distinguerunt, e seminum strophiola v. sculptura, e stylorum indole, raro cum habitu conveniunt. Divisiones sequentes, e Boissierianis selectæ, imprimis ex habitu et inflorescentia sumptæ, sat naturales videntur, nec magis incertæ evadunt quam plures e minoribus a Boissiero propositis hic vero non separatis.

1. *Anisophyllum.* Herbæ prostratæ diffusæ v. divaricato-ramosæ, rarissime basi frutescentes. Folia omnia opposita, linea elevata plus minus distincte stipulifera connexa, basi plus minus inæqualia v. obliqua. Involucra solitaria v. cymosa, sæpius minima; glandulæ 4 rarius 5, sæpius appendicula petaloidea auctæ. Species in America Australia et orbis veteris regionibus tropicis numerosæ, in hemisphærio boreali orbis veteris paucæ, plurimæ parvæ prostratæ inter se ægre distinguendæ, paucæ majores Sandwicenses glandulis exappendiculatis insignes, et mediantibus *E. atoto*, *E. lævi*, etc. cum cæteris *Anisophyllis* arcte junctæ. *Boiss. Ic. Euph. t.* 1 *ad* 26. *Jacq. Ic. Rar. t.* 476, 478 *Hort. Vind. t.* 186. *Reichb. Ic. Fl. Germ. t.* 131. *Hook. Exot. Fl. t.* 36. *Sibth. Fl. Gr. t.* 461. *Dcne. in Jacquem. Voy. Bot. t.* 157. *Miq. Stirp. Surin. t.* 28. *Muell. Arg. in Mart. Fl. Bras.* xi. ii. *t.* 92. ANISOPHYLLUM, *Haw. Syn. Pl. Succ.* 159.

2. *Adenopetalum.* Herbæ rarius frutices, caule non vel vix carnoso. Folia sparsa v. superiora,

rarius omnia opposita v. ternatim verticillata; glandulæ v. rarius setulæ ad basin petiolorum geminæ (stipulares?) v. ad axillas solitariæ, sæpe minutæ v. obsoletæ. Involucra axillaria v. terminalia, solitaria, cymulosa; glandulæ 5, rarius 4, sæpius appendicula petaloidea auctæ. Species omnes Americanæ, habitu et inflorescentia sæpius fere *Eremophyti*, rarius *Poinsettiæ*, rarissime *Tithymali*, ab omnibus differunt glandulis ut in *Anisophyllo* appendiculatis. Sectio igitur quodammodo polymorpha, non magis tamen quam sectiones minores Prodromi *Crossadenia* et *Tricherostigma*. Sequentes includimus Boissierianas:—

Zygophyllidium. Species annuæ, dichotomæ, foliis omnibus oppositis v. infimis solis alternis. Semina tuberculata. *Boiss. Ic. Euph. t.* 27 *ad* 30.

Cyttarospermum. Herbæ fruticesve. Folia inferiora sæpius alterna, superiora varia. Inflorescentia nunc axillaris anomala, nunc dichotoma, laxe cymosa. *Boiss Ic. Euph. t.* 31 *ad* 37. *Jacq. Ic. Rar. t.* 477. *Muell. Arg. in Mart. Fl. Bras.* xi. ii. *t.* 97. Adenopetalum, *Kl. et Garcke in Monatsber. Akad. Berl.* 1859, 250 (foliis floralibus concoloribus, involucris sæpius 4-meris glandularum appendicibus indivisis). Eumecanthus, *Kl. et Garcke, l.c.* 248 (foliis floralibus coloratis petaloideis, involucris sæpius 4-meris glandularum appendicibus indivisis), et Leptopus, *Kl. et Garcke, l.c.* 249 (involucris sæpius 4-meris, glandularum appendicibus sæpius partitis).

Dichilium. Herbæ elatiores, habitu et inflorescentia *Cyttarospermo* (*Eumecantho*) convenientes, seminibus longitudinaliter mamilloso-tuberculatis. *Boiss. Ic. Euph. t.* 38. *Muell. Arg. in Mart. Fl. Bras.* xi. ii. *t.* 93.

Alectoroctonum, *Schlecht. in Linnæa* xix. 252. Frutices ramis demum fere articulatis. Folia sæpius verticillata, longe petiolata; grex habitu satis distinctus. *Boiss. Ic. Euph. t.* 39, 40. *Jacq. Ic. Rar. t.* 479. *Bot. Mag. t.* 883. His tamen addidit Boissier in sectione sua *Aleotoroctona* species nonnullas herbaceas habitu valde diversas. *Boiss. Ic. t.* 40 *bis*.

Petaloma, *Rafin.* (ex *Boiss.*) (Dichrophyllum, *Kl. et Garcke, l.c.* 249). Herbæ foliis alternis, cymis more *Poinsettiæ* terminalibus. Bracteæ seu folia floralia insigniter albo-marginata. *Bot. Mag. t.* 1747.

Crossadenia. Species paucæ, inter se valde dissimiles, habitu speciebus variis gerontogeis affines sed glandularum appendice palmatifida v. 2-cornuta distinctæ. *E. goyasensis*, Boiss., *Epithymæ* in *Tithymalo* simillima est; *E. sarcodes*, Boiss., Muell. Arg. in Mart. Fl. Bras. xi. ii. t. 94, *Rhizanthium* refert; *E. phosphorea*, Mart., Muell. Arg. l.c. t. 95 (glandularum appendice ex icone nec glandula ipsa bicornuta) speciebus carnosis costatis aphyllis accedit; *E. lycioides*, Boiss., cum *E. cuneata* comparanda, *E. gymnoclada*, Boiss., cum *Tirucallis*.

Stachydium. Species 3, Americæ tropicæ, inter se valde affines et forte unius varietates, quoad habitum et folia *Dichilio* similes, sed bracteæ seu folia floralia in spicas secundas fere strobiliformes imbricata more *E. elegantis* affiniumque in *Anisophyllo*. *Muell. Arg. in Mart. Fl. Bras.* xi. ii. *t.* 96. His addidit Boissier speciem Austro-Africanam imperfecte notam a nobis non visam et verisimiliter alienam.

Tithymalopsis, *Kl. et Garcke, l.c.* 249. Species paucæ, boreali-Americanæ, *Zygophyllidiis* subsimiles, sed perennes, glandulis ad basin foliorum nullis v. vix conspicuis. *Boiss. Ic. Euph. t.* 42. *Hook. Ic. Pl. t.* 346. *Bot. Mag. t.* 2992. *Lodd. Bot. Cab. t.* 390.

Tricherostigma, *Kl. et Garcke, l.c.* 248. Frutices inflorescentia axillari v. laterali, inter se cæterum quam maxime dissimiles. Species 2, Californicæ, *Benth. Bot. Sulph. t.* 23 b et 24 cum tertia (inedita?) Domingensi, ramis divaricatis tortuosis crassiusculis, foliis parvulis in ramulis seu gemmis lateralibus confertis; quarta, *E. antisyphilitica*, habitu fere *Ephedroideo* ramis elongatis teretibus aphyllis, cum *E. fulgente*, Karw., ex America centrali (*Paxt. Mag.* iv. 31, *cum ic.*; *Maund, Botanist, t.* 100; *E. jacquiniæflora, Bot. Mag. t.* 3673) ramis tenuibus elongatis laxis, foliis alternis longiuscule petiolatis, inflorescentia axillari breviter subramosa vix lege naturali associata. Huic habitu foliis et inflorescentia convenit *E. Hoffmanniana*, Boiss. Ic. Euph. t. 50 (Euphorbiastrum, *Kl. et Garcke, l.c.* 252) ex eodem loco et glandulis solis differt, quæ in *E. fulgenti* in appendicem magnam petaloideam coloratam expansæ, in *E. Hoffmanniana* in laminam latam crassam supra papilloso-rugosam.

Portulacastrum, species 2 continet Chilenses v. Bolivianas annuas diffusas, habitu fere *Anisophylli*, sed folia alterna basi æqualia exstipulata.

3. *Poinsettia.* Herbæ suffruticesve rarius frutices, ramis floralibus non umbellatis. Folia infima v. omnia alterna, superiora sæpe opposita; stipulæ 0 nisi setæ minutæ v. glandulæ ad basin petiolorum. Involucra ad apices ramorum in cymam conferta, bracteis foliaceis seu foliis floralibus sæpe coloratis cincta, glandulis exappendiculatis. Species omnes Americanæ nisi in orbe vetere inquilinæ,

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a *Tithymalo* inflorescentia, ab *Adenopetalo* glandulis involucri distinctæ. Hæ glandulæ sæpe inæquales v. ad unam reductæ genus quodammodo cum *Pedilantho* connectunt. *Jacq. Ic. Rar. t.* 480. *Hort. Schœnbr. t.* 277. *Reichb. Iconogr. Exot. t.* 173, 174. *Bot. Reg. t.* 765. POINSETTIA, *Grah.* in *Edinb. New Philos. Journ.* xx. 412; *Bot. Mag. t.* 3493.

E. geniculata, Saund. Ref. Bot. t. 231 non Ort. est *E.* (*Anisophyllum*) *hypericifolia*.

4. *Eremophyton*. Herbæ suffruticesve, ramis superioribus sæpe dichotomis nec umbellatis. Folia inferiora alterna, superiora interdum opposita, exstipulata. Involucra solitaria, axillaria terminalia v. in dichotomiis, glandulis exappendiculatis. Species omnes gerontogeæ. *Boiss. Ic. Euph. t.* 43, 44, 49. *Anders. in Journ. Linn. Soc.* v. *Suppl. t.* 5. Hic includimus sectiones *Cheirolepidium*, *Eremophyton* et *Pseudacalypha*, Boiss., nec satis differre videtur sect. *Bongium*, Boiss. (*E. bongensis*, Kotschy in Pl. Tinn. t. 19). Styli in pluribus sectionibus variant liberi v. plus minus connati, integri v. plus minus bifidi.

E. Guienzii, Boiss., ex Africa australi, a Boissiero lapsu calami sub *Eremophyto* inclusa, est eadem ac *E. epicyparissias*, E. Mey.

5. *Euphorbium*. Caules carnosi, sæpius crassi, teretes angulati v. elevato-costati, aphylli v. foliis paucis caducis coronati. Cymæ laterales v. terminales, sæpius subsessiles, ad capitula solitaria v. pauca more *Eremophyti* reducta, rarius ramis subumbellatim evolutis fere *Tithymali*. Stipulæ 0 (v. minutæ glanduliformes?). Nodi interdum varie aculeati v. spiniferi. Glandulæ involucri integræ, exappendiculatæ. Species pro maxima parte Africanæ, paucæ Asiaticæ v. Americanæ, in Europa et Australia desunt. Subsectiones sequentes quoad species plerasque distinctæ formis intermediis connectuntur.

a. *Tirucalli* (ARTHROTHAMNUS, *Kl. et Garcke, l.c.* 251). Frutices ramis angustis teretibus v. compressis, alternis oppositis v. fasciculatis, sæpissime aphyllis. Species austro-Africanæ v. tropicæ utriusque orbis. *Boiss. Ic. Euph. t.* 46. *Hook. Ic. Pl. t.* 182, 700. *Webb, Phytogr. Canar. t.* 208. *Arthrothamnus* a Boissiero distinguitur ramis articulatis, sæpe tamen variant ramulis plus minus ætate articulatis, et *E. Tirucalli* ipsa est species typica *Arthrothamni*, Kl. *Lyciopsis* (*E. cuneata*, Jaub. et Spach, Ill. Pl. Or. t. 463, 464; Anders. in Journ. Linn. Soc. v. Suppl. t. 4) est species Arabica, monente jam Boissiero *Tirucalli* valde affinis, differt caule ramosiore minus carnoso, nodis sæpius folia parva ferentibus, habitu toto *E. lycioidem*, *E. Hindsianam* aliasque Americanas glandulis appendiculatis distinctas referens.

b. *Goniostema*. Species paucæ Mascarenses, caule crasso, costis elevatis fere alatis inermibus. *DC. Pl. Gr. t.* 124. *Lodd. Bot. Cab. t.* 1477.

c. *Diacanthium*. Caules crassi, nodis elevatis in costas elevatas v. alas plus minus connatis v. rarius sparsis, aculeis solitariis (infrafoliaceis?) v. geminis (infrastipularibus?) v. rarius ternis sæpissime armatis. Species Africanæ v. Asiaticæ. *Boiss. Ic. Euph. t.* 48. *DC. Pl. Gr. t.* 46, 77, 139, 140, 140*, 151. *Wight, Ic. t.* 897, 898, 1862, 1863, 1993. *Bot. Mag. t.* 2902, 3527. *Lodd. Bot. Cab. t.* 1334. *Andr. Bot. Rep. t.* 617. *Saund. Ref. Bot. t.* 39. ANTHACANTHA, *Lemaire, Ill. Hort.* 1858; *Misc.* 64. STERIGMANTHE, *Kl. et Garcke, l.c.* 252.

d. *Treisia*. Caules crassi, nodis elevatis plus minus mammiformibus, arcte confertis sed sparsis nec seriatis, inermibus v. pedunculo demum spinescente rarius armatis. *Boiss. Ic. Euph. t.* 47. *DC. Pl. Gr. t.* 144. *Jacq. Hort. Schœnb. t.* 106, 207, 208, 484; *Ic. Rar. t.* 85. *A. DC. Pl. Rar. Jard. Gen. Not.* vii. *t.* 5. *Bot. Mag. t.* 2520, 2624, 3476. *Lodd. Bot. Cab. t.* 220, 1316. *Saund. Ref. Bot. t.* 161, 209. TREISIA, DACTYLANTHES et MEDUSEA, *Haw. Syn. Pl. Succ.* 131 *ad* 133.

Rhizanthium a *Treisia* non differt nisi caule carnoso abbreviato pro rhizomate descripto, ramis floriferis magis evolutis.

6. *Tithymalus*. Herbæ, rarius frutices, parum ramosi. Folia caulina alterna v. rarissime opposita, floralia sæpe opposita, omnia exstipulata. Ramuli floriferi dichotome ramosi v. rarius simplices monocephali, axillares, superiores in umbellam 3-∞-radiatam rarius ad radia 2 reductam conferti. Involucri glandulæ exappendiculatæ. Species numerosæ, per totam aream generis Australia excepta dispersæ, pro maxima tamen parte regionis Mediterraneæ ab ins. Canariensibus usque ad Persiam incolæ. *Boiss Ic. Euph. t.* 54 *ad* 119. *Vent. Jard. Malm. t.* 30. *Sm. Ic. Pict. t.* 3. *Jacq. Ic. Rar. t.* 86 *ad* 89, 481 *ad* 485; *Hort. Schœnb. t.* 107, 485 *ad* 488; *Hort. Vind. t.* 188; *Fl. Austr. t.* 121, 344, 345, 375, 376, 435, 436, 450; *App. t.* 14. *Jacq. f. Ecl. t.* 66. *Reichb. Ic. Fl. Germ. t.* 132 *ad* 150. *Waldst et Kit. Pl. Rar. Hung. t.* 54, 55, 93, 135, 162, 280. *Ledeb. Ic. Fl. Ross. t.* 12, 185 *ad* 192, 387. *Klotzsch in Pr. Waldem. Reise, Bot. t.* 18 *ad* 20. *Wight, Ic. t.* 1864. *Sibth. Fl. Gr. t.* 460, 462 *ad* 471. *Jaub. et Spach, Ill. Pl. Or. t.* 130. *Grant in Trans. Linn. Soc.* xxix. *t.* 93. *Del. Fl. Æg. t.* 30. *Desf. Fl. Atl. t.* 101 *ad* 103. *Ten. Fl. Nap. t.* 143.

Moris, Fl. Sard. t. 109. *All. Fl. Ped. t.* 69, 83. *Jord. Obs. t.* 11. *Cav. Ic. t.* 34. *Boiss. Voy. Esp. t.* 159 *ad* 163. *Brot. Phyt. Lusit. t.* 76. *Webb, Phytogr. Canar. t.* 207, 209. *Bot. Mag. t.* 1305, 1494, 1961, 2258, 3321. *Bot. Reg. t.* 190, 274 *et* 1838, *t.* 43. *Lodd. Bot. Cab. t.* 1145. *Saund. Ref. Bot. t.* 210. GALARHŒUS et ESULA, *Haw. Syn. Pl. Succul.* 143, 153.

Inter species in Prodromo enumeratas series 2, *Oppositifoliæ*, et series 3, *Crotonopsides, Boiss. Ic. Euph. t.* 51 *ad* 53, habitu et inflorescentia abnormi *Eremophytis* accedunt, *Laurifoliæ* et *Pachycladæ* insignes sunt caule alte fruticoso v. arborescente, foliis ad apices ramorum confertis, umbellæ radiis mono- v. oligo-cephalis, nonnullæ ex his *Pachycladis Tirucalli* accedunt.

KERASELMA et ATHYMALUS, *Neck. Elem.* ii. 353, genera ad species *Euphorbiæ* proposita, imperfecte descripta, ad sectiones suas non certe referenda.

3. **Synadenium,** *Boiss. in DC. Prod.* xv. ii. 187.—Involucrum campanulatum, alte 5-lobum, lobis squamiformibus fimbriatis ; glandulæ in cupulam v. discum concavum carnosum truncatum margine rugulosum basi involucri affixum eoque vix breviorem connatæ. Flores ♂ in involucro ∞, pedicellati, in fasciculos 5 lobis involucri oppositos conferti. Perianthium 0. Stamen 1, filamento brevi cum pedicello articulato ; antherarum loculi distincti. Flos ♀ in centro involucri 1, intra cupulam bracteolarum cum stipite crasso articulatus. Perianthium 0. Ovarium sessile, 3-loculare ; styli alte connati, 2-fidi ; ovula in loculis solitaria. Capsula 3-cocca et semina *Euphorbiæ*.—Frutices ramis teretibus crassis subcarnosis. Folia sparsa, obovata, integerrima, crassiuscula. Cymæ terminales, 2–3-chotomæ, foliis floralibus seu bracteis oppositis. Involucra in dichotomiis v. ad apices ramulorum intra bracteas summas solitaria, sessilia. Bracteæ intra involucrum pone quemque fasciculum florum ♂ latæ, fasciculum plus minus includentes et dorso plus minus in tubum seu cupulam integram v. lobatam circa florem ♀ connatæ ; bracteolæ interiores parvæ, lineares.

Species 2 v. 3, Africæ australis et tropicæ orientalis incolæ. *Bot. Mag. t.* 5633 (quoad bracteas fl. ♂ imperfecte).

4. **Calycopeplus,** *Planch. in Bull. Soc. Bot. Fr.* viii. 30.—Involucrum campanulatum v. patens, alte 4-lobum ; glandulæ 4 extra lobos iis alternæ parvæ stipitatæ v. 0. Flores ♂ in involucro ∞, pedicellati, in fasciculos 4 lobis involucri oppositos conferti. Perianthium 0. Stamen 1, filamento brevi cum pedicello articulato ; antherarum loculi distincti. Fl. ♀ in centro involucri 1. Perianthium cupulatum v. latum, 4- v. 6-lobum. Ovarium 3-loculare ; styli distincti v. basi coaliti, integri v. 2-fidi ; ovula in loculis solitaria. Capsula 3-cocca et semina *Euphorbiæ*.—Frutices v. suffrutices ephedroidei, sub anthesi sæpius aphylli, ramis virgatis oppositis v. verticillatis teretibus angulatis v. compressis. Folia in ramulis novellis opposita v. verticillata, angusta, integerrima, caducissima ; stipulæ minutæ v. 0. Involucra parva, subsessilia, axillaria v. terminalia, viridia v. cum lobis perianthii ♀ margine albo-petaloidea. Bracteæ intra involucrum pone quemque fasciculum latæ, fasciculum includentes, dorso florem centralem spectantes sed liberæ ; bracteolæ interiores angustæ v. 1–2 in quoque fasciculo latæ.

Species 2 v. 3, Australiæ occidentalis incolæ. *Benth. Fl. Austral.* vi. 53. *Boiss. Ic. Euph. t.* 120 (*Euphorbia*).

5. **Anthostema,** *A. Juss. Euph. Tent.* 56, *t.* 18.—Involucrum imperfectum, latere exteriore hians, e bracteis 4–6 raro pluribus plus minus connatis compositum. Glandulæ magnæ, anguste scutellatæ, ad latera bractearum v. loborum involucri hinc inde deficientes. Flores ♂ in involucro ∞, breviter pedicellati, in fasciculos tot quot lobi involucri iisque oppositos conferti. Perianthii rudimentum 3–4-dentatum. Stamen 1, filamento brevi cum pedicello articulato ; antherarum loculi distincti. Flos ♀ in involucro 1, juxta aperturam sublateralis. Perianthium maris. Ovarium sessile, cum stipite articulatum, 3-loculare ; stylus 3-fidus, ramis clavatis v. 2-fidis ; ovula in loculis solitaria. Capsula 3-cocca et semina *Euphorbiæ*.—Arbores. Folia alterna, integerrima, coriacea, nitidula, parallele pennivenia. Involucra parva, in cymas densas ad axillas sessiles conferta. Bracteæ ad ramos cymæ et sub involucris parvæ, oppositæ ; intra involucrum pone quemque fasciculum latæ, fasciculum includentes, inter se liberæ ; bracteolæ interiores lineares.

Species 3, Africæ tropicæ et Madagascariæ incolæ. *Boiss. in DC. Prod.* xv. ii. 188. *Baill. Etud. Euph. t. 5, f.* 1 *ad* 7; *Adans.* v. 366.

TRIBUS II. STENOLOBIEÆ.

6. **Poranthera,** *Rudge in Trans. Linn. Soc.* x. 302, *t.* 22.—Flores monoici, sæpius petaliferi. Fl. ♂: Calycis segmenta 5, petaloidea, imbricata. Petala 5, parva v. 0, basi glandula parva aucta. Stamina 5, segmentis calycinis opposita, filamentis liberis; antheræ 4-locellatæ, locellis apice poris distinctis v. in 2 confluentibus dehiscentibus. Ovarii rudimenta 3, parva, clavata v. membranacea. Fl. ♀: Calyx et petala maris. Ovarium latum, apice planum v. concavum, 6-lobum, 3-loculare; styli 3 usque ad basin in ramos 2 lineares divisi; ovula in loculis gemina. Capsula depresso-globosa, loculicide 3-valvis v. in coccos 2-valves dehiscens, valvis coccisve ab axi columnari persistente dissilientibus. Semina reticulata; embryo teres, incurvus, cotyledonibus radicula non latioribus.—Herbæ annuæ v. demum suffrutescentes. Folia alterna v. rarius irregulariter opposita, membranacea, integerrima, parva v. angusta. Stipulæ parvæ, acuminatæ. Flores parvi, albi, dense racemosi, in axillis bractearum solitarii, pedicellati, ♀ ad basin racemi pauci. Racemi capituliformes, ad apices ramorum solitarii v. sæpius in corymbo terminali foliato plures.

Species 5, omnes Australianæ. *Benth. Fl. Austral.* vi. 55. *Brongn. in Duperr. Voy. Coq. Bot. t.* 50. *Baill. Etud. Euph. t.* 25. *f.* 1 *ad* 9. *Hueg. Bot. Archiv. t.* 8. *P. microphylla*, Brongn., recenter a Cheesmannio in Nova Zelandia lecta, verisimiliter ibidem inquilina est.

7. **Micrantheum,** *Desf. in Mém. Mus. Par.* iv. 253, *t.* 14.—Flores plerumque monoici, apetali. Fl. ♂: Calycis segmenta 6, petaloidea, imbricata, 3 interiora sæpe paullo majora. Discus 0. Stamina 3, segmentis exterioribus opposita, v. 6 segmentis omnibus opposita v. 8–9 minus regulariter affixa, filamentis distinctis; antherarum loculi paralleli, longitudinaliter dehiscentes. Ovarii rudimentum parvum, lobatum. Fl. ♂: Calyx maris. Ovarium 3-lobum, 3-loculare, lobis in stylos simplices desinentibus; ovula in loculis gemina. Capsula ovoidea, in coccos 2-valves a columella persistente dissiliens. Semina in loculis gemina v. abortu solitaria, oblonga, lævia, strophiolata; embryo linearis, rectus, cotyledonibus radicula longioribus vix latioribus.—Frutices ericoidei, ramosissimi. Folia brevissime petiolata, parva, angusta, integerrima, coriacea, ternatim ad nodos alternos affixa (quasi 3-foliolata absque petiolo communi). Flores parvi, in axillis superioribus solitarii v. pauci, ♂ breviter pedicellati, ♀ sæpius sessiles.

Species 2, Australianæ. *Benth. Fl. Austral.* vi. 57.

CALETIA, *Baill. Etud. Euph.* 553, *t.* 26, genus ad *M. hexandrum* Hook. f. propositum, ob lobos ovarii rudimenti in flore ♂, staminum numero variabili, minus definite segmentis perianthii alternos quam in speciebus typicis, postea ab auctore uti a Muell. Arg. ad species nonnullas *Pseudanthi* extensum est, sed nobis nec naturale nec bene definitum videtur.

8. **Pseudanthus,** *Sieb. in Spreng. Syst. Cur. Post.* 22. (Chrysostemon, *Klotzsch in Pl. Preiss.* ii. 232. Chorizotheca, *Muell. Arg. in Linnæa*, xxxii. 76.)—Flores monoici, apetali. Fl. ♂: Calycis segmenta 6, petaloidea v. rigidula, imbricata, subæqualia v. 1 ex interioribus deficiens v. in filamentum longum mutatum. Discus 0. Stamina 3, 6 v. ∞ usque ad 20, libera v. basi cum rudimento parvo ovarii connata; antherarum loculi distincti, extrorsum 2-valvatim dehiscentes. Fl. ♀: Calyx maris. Ovarium 2–3-lobum, lobis in stylos breves crassos divergentes desinentibus, prima juventute 2–3-loculare, ovulis in quoque loculo geminis, per anthesin septis evanidis et ovulis plerisque abortientibus 1-loculare evadit, ovulo unico perfecto. Capsula oblonga, abortu 1-locularis, in valvas 4 v. 6 dehiscens. Semen oblongum, læve, strophiolatum; embryo linearis, rectus, cotyledonibus radicula longioribus vix latioribus.—Frutices ericoidei. Folia opposita v. alterna, parva, coriacea, obtusa, marginibus crassis, costa subtus prominula; stipulæ parvæ, subulatæ v. basi dilatatæ. Flores parvi, in axillis superior-

ibus sessiles v. breviter pedicellati, ♂ sæpius ∞ in eadem axilla, ♀ solitarii v. masculis paucis associati.

Species 7, Australianæ. *Benth. Fl. Austral.* vi. 58. *Endl. Atakta, t.* 11.

Ovarii rudimentum in flore ♂ *Pseudanthi* ab auctoribus negatur, nos tamen semper invenimus in specie typica *P. pimeleoidi*, Sieb., ut in cæteris. In solo *P. polyandro*, F. Muell., deest, quem ad *Stachystemonem* transtulimus.

9. **Stachystemon,** *Planch. in Hook. Lond. Journ.* iv. 471, *t.* 15.—**Flores monoici, apetali. Fl. ♂ : Calycis segmenta 6, rigidula, subæqualia, integerrima, imbricata. Discus 0. Stamina ∞, omnia v. interiora in columnam centralem connata; antheræ sessiles v. filamentis brevibus fultæ, loculis distinctis extrorsum 2-valvatim dehiscentibus. Ovarii rudimentum 0. Fl. ♀ : Calycis segmenta latiora et teneriora quam in mare sæpiusque fimbriata. Ovarium 2-lobum v. rarius 3-lobum, lobis in stylos breves crassos divergentes desinentibus, prima juventute 2- v. rarius 3-loculare, ovulis in quoque loculo geminis, per anthesin septis evanidis et ovulis plerisque abortivis 1-loculare evadit, ovulo unico perfecto. Capsula ubi nota ovoidea, abortu 1-locularis. Semen oblongum, læve, strophiolatum.—Frutices ericoidei. Folia alterna, parva, coriacea, obtusa, costa subtus prominula; stipulæ minimæ. Flores sessiles v. breviter pedicellati, ad apices ramorum fasciculati, ♂ sæpius ∞ cum 1–3 ♀. Columna staminea perianthio longior, interdum valde elongata.**

Species 3, Australiæ occidentalis extratropicæ incolæ. *Benth. Fl. Austral.* vi. 61.

Genus *Pseudantho* valde affine nec differt nisi columna staminea centrali absque rudimento ovarii.

10. **Beyeria,** *Miq. in Ann. Sc. Nat. ser.* 3, i. 350, *t.* 15. (Calyptrostigma, *Klotzsch in Pl. Preiss.* i. 175.)—**Flores monoici v. rarius dioici, sæpius petaliferi. Fl. ♂ : Calycis segmenta 5 rarius 4, plus minus petaloidea, imbricata, concava. Petala sæpius tot quot calycis segmenta, parva v. rarius calyce longiora, interdum pauciora v. plura v. minima v. 0. Glandulæ petalis alternæ v. rarius oppositæ. Stamina numerosa, filamentis brevissimis in receptaculo hemisphærico congesta; antherarum loculi distincti, paralleli, extrorsum longitudinaliter dehiscentes. Ovarii rudimentum 0. Fl. ♀ : Calycis segmenta quam in mare sæpius rigidiora, post anthesin sæpius aucta. Petala eadem. Ovarium sessile, 3-loculare, integrum; stigma sessile, latum, integrum v. 3-lobum, planum peltatum v. plus minus conicum v. calyptriforme, rarius alte 3-lobum; ovula in loculis solitaria. Capsula 3-locularis, 3-sperma, dura, tardius dehiscens, rarius abortu 1-locularis 1-sperma. Semina oblonga, lævia, strophiolata; embryo in medio albumine linearis, cotyledonibus radicula longioribus vix latioribus.—Frutices sæpe glutinosi. Folia alterna, sæpius angusta, integerrima, marginibus recurvis v. revolutis, subtus pube appressa stellata albida. Flores parvi, axillares, ♂ solitarii v. 2–3-ni, rarius racemosi; ♀ sæpius solitarii.**

Species 13, omnes Australianæ. *Benth. Fl. Austral.* vi. 63. In sectiones sequentes distribuuntur:—

1. *Eubeyeria.* Antheræ duplo longiores quam latæ, connectivo integro v. vix lobato adnatæ. Stigma integrum v. vix lobatum. *Labill. Pl. Nov. Holl.* ii. *t.* 222 (*Croton*).

2. *Beyeriopsis.* Antheræ breves, loculis distinctis v. connectivo alte 2-lobo adnatis v. semiliberis connectivo integriore. Stigma integrum v. vix lobatum. Beyeriopsis, *Muell. Arg. in DC. Prod.* xv. ii. 199.

3. *Oxygyne.* Flores ♂ racemosi. Antheræ *Beyeriopseos.* Stigma alte 3-lobum. Petala calyce longiora. Species unica tropica, *Ricinocarpo* accedens, sed antheræ, stigmate lobi lati recurvi, aliæque notæ potius *Beyeriæ.*

11. **Ricinocarpus,** *Desf. in Mém. Mus. Par.* iii. 459, *t.* 22. (Rœperia, *Spreng. Syst. Veg.* iii. 13.)—**Flores monoici, petaliferi. Fl. ♂ : Calycis segmenta 4–6, sæpius 5, subæqualia, imbricata. Petala totidem sæpius longiora, rarius deficientia. Glandulæ totidem, petalis alternæ. Stamina numerosa, filamentis in columnam centralem connatis apice breviter liberis; antheræ reflexæ, loculis distinctis parallelis extrorsum longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀ : Calyx et petala maris. Ovarium sessile, 3-loculare; styli basi breviter connati, alte 2-fidi; ovula in loculis solitaria. Capsula in**

cocco bivalves dissiliens. Semina oblonga, lævia, strophiolata; embryo ubi notus in medio albumine linearis, cotyledonibus radicula longioribus vix latioribus.—Frutices glabri v. stellato-tomentosi. Folia alterna, integerrima, lineari-oblonga v. lanceolata, marginibus recurvis v. revolutis, subtus pallida v. albo-tomentosa. Flores ♂ solitarii glomerati v. rarius racemosi, terminales v. ramulo florifero abbreviato pseudo-axillares; ♀ sæpius solitarii v. glomerulo v. racemo masculorum associati. Pedicelli bractea parva squamiformi stipati, sæpeque basi 2-bracteolati.

Species 13, omnes Australianæ. *Benth. Fl. Austral.* vi. 69. *Endl. Iconogr. t.* 124.

12. **Bertya**, *Planch. in Hook. Lond. Journ.* iv. 472, *t.* 16.—Flores monoici, apetali. Fl. ♂: Calycis segmenta 5, petaloidea, subæqualia, imbricata. Discus 0. Stamina numerosa, filamentis in columnam centralem connatis apice breviter liberis; antherarum loculi paralleli, extrorsum 2-valvatim dehiscentes. Ovarii rudimentum 0. Fl. ♀: Calyx per anthesin quam in mare sæpius minor, fructifer interdum auctus. Staminodia 0. Ovarium sessile, 3-loculare; styli liberi v. basi breviter connati, alte 2-4-fidi, vulgo 3-fidi; ovula in loculis solitaria. Capsula ovoidea v. oblonga, abortu sæpius 1-locularis, 1-sperma. Semen oblongum, læve, strophiolatum; embryo ubi notus linearis, rectus, cotyledonibus radicula longioribus vix latioribus.—Frutices sæpe glutinosi, plus minus stellato-tomentosi v. glabri. Folia alterna, marginibus recurvis v. revolutis rarius planis, adulta supra glabra, subtus tomentosa v. alba. Flores axillares, solitarii v. pauci, pedicellati v. fere sessiles. Bracteæ in pedicello 3-8, parvæ, persistentes imbricatæ et calycem simulantes v. deciduæ.

Species 10, omnes Australianæ. *Benth. Fl. Austral.* vi. 74. *F. Muell. Fragm.* viii. 141; *Pl. Vict. t.* 20.

13. **Monotaxis**, *Brongn. in Ann. Sc. Nat. ser.* 1, xxix. 386, *et in Duperr. Voy. Coq. Bot.* 223, *t.* 49.—Flores monoici, petaliferi. Fl. ♂: Calycis segmenta 4-5, imbricata, patentia, subæqualia, subpetaloidea. Petala totidem, calyce breviora v. longiora. Stamina numero petalorum dupla v. pauciora, filamentis in centro floris distinctis v. basi breviter connatis; antherarum loculi distincti, subglobosi, connectivo crasso curvo separati. Ovarii rudimentum 0. Fl. ♀: Calyx et petala maris. Ovarium sessile, 3-loculare; styli distincti, in ramos 2 fimbriatos divisi; ovula in loculis solitaria. Capsula globosa v. 3-dyma, inappendiculata, in coccos 2-valves dissiliens. Semina ovoidea v. oblonga, lævia, strophiolata; embryo linearis, rectus v. leviter incurvus, cotyledonibus radicula multo longioribus vix latioribus.—Herbæ suffruticesve sæpius humiles, glabri. Folia alterna, integerrima, plana v. marginibus recurvis. Flores parvi, dense cymosi, subcapitati, cymis in dichotomiis v. ad apices ramorum intra folia ultima sessilibus v. breviter pedunculatis, floribus singulis intra cymam pedicellatis, masculis numerosis, fœmineis in media cyma paucis v. solitariis. Bracteæ parvæ, squamiformes.

Species 7, omnes Australianæ. *Benth. Fl. Austral.* vi. 78. Genus in sectiones 2 dividitur:—

1. *Eumonotaxis.* Flores sæpius 4-meri. Calycis segmenta fere valvata. Petala breviora. *Endl. Atakta. t.* 8.

2. *Hippocrepandra.* Flores sæpius 5-meri. Calycis segmenta distinctius imbricata. Petala longiora. Species omnes occidentales, cymis capituliformibus sessilibus. Hippocrepandra, *Muell. Arg. in Linnæa*, xxxiv. 61.

14. **Dysopsis**, *Baill. Etud. Euph.* 435. (Molina, *C. Gay, Fl. Chil.* v. 345, *t.* 61.)—Flores monoici, apetali. Fl. ♂: Calyx tenuiter membranaceus, anguste campanulatus v. urceolatus, semi-3-fidus, lobis valvatis. Stamina 6, fundo calycis affixa, exserta, filamentis tenuissimis basi plus minus connatis; antheræ oblongæ, prope basin affixæ, versatiles, loculis contiguis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx alte 3-fidus, lobis leviter imbricatis persistentibus. Ovarium 3-loculare; styli distincti, membranacei, lanceolati, margine leviter laciniati; ovula in loculis solitaria. Capsula 3-dyma, in coccos 2-valves dissiliens, endocarpio tenui. Semina ovoidea, nitidula, testa crustacea; albumen carnosum; embryo centralis, teres, rectus, cotyledonibus radicula

brevioribus nec latioribus.—Herba tenera, prostrata, radicans, glabra v. hispidula, habitu fere *Hydrocotylis.* Folia alterna, petiolata, late ovata v. orbiculata, grosse crenata v. obtuse lobata, membranacea, 3–5-plinervia. Flores in axillis solitarii, parvi, utriusque sexus nunc brevissime nunc longe, ♀ interdum longissime, pedicellati, superiores interdum ad apices ramorum subsessiles conferti. Capsulæ parvæ.

Species 1, Andium Americæ australis et ins. Juan Fernandez incola. *Muell. Arg. in DC. Prod.* xv. ii. 949. Genus nulli arcte affine, habitu ab omnibus *Crotoneis* longe recedit et embryo certe *Stenolobiearum*, ubi *Monotaxi* quodammodo accedit.

15. **Amperea,** *A. Juss. Euph. Tent.* 35, *t.* 10. Flores monoici v. dioici, apetali. Fl. ♂ : Calyx campanulatus, subpetaloideus, 3–5-lobus. Stamina calycis loborum numero dupla v. pauciora, filamentis in centro floris liberis v. basi breviter connatis, interdum glandulis tot quot perianthii lobi cincta ; antheræ 2-loculares v. exteriores 1-loculares, loculis distinctis globosis v. ovoideis parallelis longitudinaliter dehiscentibus, connectivo interdum glandula parva coronato. Ovarii rudimentum 0. Fl. ♀ : Calyx quam in mare altius divisus, lobis 5 rarius 4 rigidiusculis, sub fructu persistens vix auctus. Ovarium sessile, 3-loculare ; styli 2-fidi ; ovula in loculis solitaria. Capsula ovoidea, appendiculis 6 dentiformibus in annulum dispositis coronata, in coccos 2-valves dissiliens. Semina obovoideo-oblonga, lævia, strophiolata ; embryo ubi notus linearis, leviter incurvus, cotyledonibus radicula longioribus vix latioribus.—Herbæ perennes suffruticesve, caule basi v. rhizomate duro sæpe lignoso, ramis decumbentibus v. erectis rigidulis sæpe subaphyllis. Folia dum adsint alterna, linearia, integerrima, marginibus revolutis v. rarius plana, subdentata. Flores parvi, ad nodos v. ad axillas glomerati, bracteis parvis scariosis cincti, ♂ sæpius numerosi, ♀ parvi v. solitarii, omnes sessiles v. brevissime pedicellati. Capsulæ parvæ.

Species 6, omnes Australianæ. *Benth. Fl. Austral.* vi. 82. *Brongn. in Duperr. Voy. Coq. Bot. t.* 49. *A. Rich. Sert. Astrol. t.* 20.

Tribus III. Buxeæ.

16. **Simmondsia,** *Nutt. in Hook. Lond. Journ.* iii. 400, *t.* 16. (Brocchia, *Mauri in Ten. Cat. Ort. Napol.* 80.)—Flores dioici, apetali. Discus 0. Fl. ♂ : Sepala 5, lata, valde imbricata. Stamina ∞ (10–20), filamentis brevissimis liberis ; antheræ magnæ, erectæ, oblongæ, loculis parallelis contiguis lateraliter 2-valvibus. Ovarii rudimentum 0. Fl. ♀ : Sepala 5–6, valde imbricata, interiora quam in mare multo longiora, foliacea. Ovarium 3-loculare ; styli distincti, lineares, subteretes, indivisi, hirsuto-papillosi, decidui ; ovula in loculis solitaria, axi affixa, pendula, raphe dorsali. Capsula majuscula, ovoideo-oblonga, acutiuscula, nitida, pericarpio coriaceo, loculicide 3-valvis. Semen abortu sæpius unicum, testa coriacea ; albumen perparcum v. 0 ; cotyledones crasso-carnosæ, radicula minima.—Frutex dichotomus, ramosissimus, minute puberulus. Folia opposita, subsessilia, integerrima, coriacea, pennivenia. Flores ♂ in glomera subglobosa ad axillas sessilia v. brevissime pedunculata conferti, sub quaque bractea solitarii sessilesque, bracteis parvis ; ♀ in dichotomiis sæpius solitarii, pedicello brevi mox recurvo.

Species 1, Californica. *Muell. Arg. in DC. Prod.* xvi. i. 22. Genus ob ovulorum positionem ad *Buxaceas* relatum, etsi floribus ♀, ovarii loculis 1-ovulatis, stylis caducissimis, aliisque notis a cæteris generibus longe distet. Stamina *Styloceratidis* v. *Toxicodendri.* Semina exalbuminosa et embryo *Amanoæ* v. *Elateriospermi.*

17. **Styloceras,** *A. Juss. Euph. Tent.* 53, *t.* 17.—Flores monoici v. subdioici, apetali. Discus 0. Fl. ♂ : Calyx 0. Stamina ∞ (6–30), receptaculo basi bracteæ adnato affixa, filamentis brevissimis ; antheræ majusculæ, oblongæ, erectæ, loculis parallelis connectivo latiusculo introrsum adnatis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀ : Sepala 5, brevia, rigidula, bracteis ∞ similibus stipata. Ovarium e carpellis 2 septis spuriis jam sub anthesi 4-loculare (prima juventute 2-loculare ex Baill.) ; styli 2, longi, cum ovario continui, distincti v. basi breviter connati, indivisi ; ovula in quoque carpello 2, in loculis solitaria, ab apice pendula, ab angulo centrali subdistantia, micropyle axin

obliquo spectante. Drupa carnosa, siccitate dura, ovoidea v. subglobosa, stylis persistentibus 2-cornuta, indehiscens, endocarpio cartilagineo subcrustaceo in pyrenas 4 v. abortu pauciores diviso. Seminum testa lævis, crustacea; albumen carnosum; cotyledones planæ, latiusculæ.—Arbores glaberrimæ. Folia alterna, petiolata, integerrima, coriacea, pennivenia, venis primariis paucis subtus valde prominulis. Spicæ ♂ ad axillas sessiles, breves, densifloræ. Flores ♀ ad axillas sæpe solitarii, pedicellati, bracteis secus pedicellum dissitis, sed interdum flos ♀ adest ad basin spicæ ♂. Ovarium et fructus interdum casu 3-mera dicuntur, in speciminibus a nobis visis semper 2-mera.

Species 3, Columbianæ v. Bolivianæ. *Muell. Arg. in DC. Prod.* xvi. i. 9. *Baill. Monogr. Bux.* 77; *Etud. Euph. t.* 26. *H. B. et K. Nov. Gen. et Sp.* vii. *t.* 637, 638.

18. **Sarcococca,** *Lindl. Bot. Reg. t.* 1012. (Lepidopelma, *Klotzsch in Pr. Waldem. Reise, Bot.* 118, *t.* 22.)—Flores monoici, apetali. Discus 0. Fl. ♂: Sepala 4, 2-seriatim imbricata, additis bracteis exterioribus 2. Stamina 4, sepalis opposita, filamentis liberis exsertis crassiusculis; antheræ juxta basin dorsifixæ, oblongæ, demum recurvæ, loculis introrsum adnatis subparallelis longitudinaliter dehiscentibus. Ovarii rudimentum urceolatum v. cupulatum, truncatum. Fl. ♀: Calyx maris, bracteis exterioribus pluribus. Ovarium 2-3-loculare; styli distincti, breves, primum erecti v. conniventes, mox recurvo-patentes, indivisi; ovula in loculis gemina, ab angulo centrali plus minus distantia, raphe dorsali, micropyle axin spectante. Fructus subdrupaceus, ovoideus v. globosus, vix sulcatus nec cornutus, indehiscens, exocarpio pulposo-carnoso v. tenui subsicco, endocarpio tenuiter crustaceo. Semina abortu sæpius solitaria subglobosa v. gemina hemisphærica, estrophiolata, testa membranacea; albumen carnosum; cotyledones planæ, latæ, crassiusculæ.—Frutices glabri. Folia alterna, breviter petiolata, integerrima, coriacea, pennivenia v. simul triplinervia. Racemuli brevissimi, densi, ad axillas glomerati. Flores sub quaque bractea solitarii, ♂ et ♀ in diversis axillis, v. ♀ ad basin racemuli, ♂ solitarii.

Species 3, Indiæ Orientalis et Archipelagi Malayani incolæ. *Muell. Arg. in DC. Prod.* xvi. i. 11. *Baill. Monogr. Bux. t.* 3. *Hook. Exot. Fl. t.* 148 (*Pachysandra*). *Wight, Ic. t.* 1877.

Actinostemon. *Miq. Fl. Ind. Bat. Suppl.* 444, planta Sumatrana a nobis non visa, ex auctoris descriptione est verisimiliter eadem ac *Sarcococca sumatrana*, Bl., a Muellero inter varietates *S. saligna* inclusa.

19. **Buxus,** *Linn. Gen. n.* 1053.—Flores monoici, apetali. Discus 0. Fl. ♂: Sepala 4, 2-seriatim imbricata. Stamina 4, sepalis opposita, filamentis liberis exsertis crassiusculis; antheræ juxta basin dorsifixæ, oblongæ, demum recurvæ, loculis introrsum adnatis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum truncatum v. obtuse 3-lobum. Fl. ♀: Sepala 6, valde imbricata, exteriora minora. Ovarium 3-loculare; styli breves, crassi, inter se distantes v. rarius basi contigui; ovula in loculis gemina, ab apice pendula, ab angulo interno distantia, raphe dorsali, micropyle axin spectante. Capsula ovoidea, stylis persistentibus 3-cornuta, loculicide dehiscens, valvis indivisis stylis fissis 2-cornutis, pericarpio indurato, endocarpio soluto cartilagineo. Semina oblonga, 3-quetra, strophiola parva, testa crustacea nigra nitida; albumen subcarnosum; cotyledones oblongæ, radicula vix latiores.—Frutices ramosissimi, glabri, interdum demum arborescentes. Folia opposita, breviter petiolata, integerrima, coriacea, pennivenia. Racemuli densi, ad axillas sessiles v. breviter pedunculati. Bracteæ sæpe numerosæ, segmentis perianthii similes nisi minores. Flores sub quaque bractea solitarii, sessiles v. breviter pedicellati, terminales sæpe ♀, cæteris ♂, et bracteæ plures sæpe vacuæ. Ovarii apex in speciebus typicis inter stylos truncatus v. glanduloso-3-lobus, in *B. subcolumnari*, Muell. Arg., styli basi contigui.

Species ad 19, quarum 6 regionum temperatarum v. montanarum hemisphærii borealis in orbe vetere incolæ, cum una Madagascariensi et altera Africana tropica, cæteræ omnes in India occidentali crescentes. *Muell. Arg. in DC. Prod.* xvi. i. 14. *Baill. Monogr. Bux.* 58; *Adans.* xi. 268.

Genus in sectiones 2 dividitur: 1. *Eubuxus,* species gerontogeæ, spicis densis, sepalis bracteisque

latis membranaceo-scariosis. *Baill. Monogr. Bux. t.* 1. *A. Juss. Euph. Tent. t.* 1. *Gærtn. Fruct. t.* 108, *quoad embryonem male. Nees, Gen. Fl. Germ. Monochlam. n.* 41. *Reichb. Ic. Fl. Germ. t.* 153.

2. *Tricera*, species Indiæ occidentalis spicis v. racemis laxioribus sæpe paucifloris, sepalis minoribus sæpe angustis et siccitate nigricantibus, bracteis parvis. *Baill. Monogr. Bux. t.* 2. Crantzia, *Swartz, Prod.* 38. Tricera, *Swartz, Fl. Ind. Occid.* 331, *t.* 7. *A. Juss. Euph. Tent. t.* 1. *A. Rich. Fl. Cub. t.* 71.

20. **Pachysandra,** *Mich. Fl. Bor. Amer.* ii. 177, *t.* 45.—Flores monoici, apetali. Discus 0. Fl. ♂: Sepala 4, 2-seriatim imbricata. Stamina 4, sepalis opposita, filamentis liberis exsertis crassiusculis; antheræ dorsifixæ, oblongæ, demum recurvæ, loculis introrsum adnatis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum vertice truncatum. Fl. ♀: Sepala 4 v. 6, 2-seriatim imbricata. Ovarium 3-loculare; styli basi subdistincti, erecti, longiusculi, superne patentes, indivisi; ovula in loculis gemina, ab angulo centrali parum distantia. Fructus speciei typicæ Americanæ a nobis non visus; capsula subglobosa, 3-cornis, in carpella 2-valvia dissiliens (*Mich.*, *A. Gray*); in specie Japonica subdrupaceus videtur, epicarpio in sicco laxo in vivo verisimiliter pulposo, endocarpio tenuiter crustaceo. Semina pauca, obovoideo-oblonga, testa crustacea nitida omnino *Buxi.*—Herbæ basi procumbentes radicantesque, ramis adscendentibus apice foliatis. Folia alterna, petiolata, latiuscula, grosse dentata v. rarius integerrima, triplinervia. Spicæ longiusculæ, floribundæ, in specie Americana ad basin caulis infra folia ad axillas squamarum parvarum sitæ, floribus ♀ ad basin spicæ paucis dissitis cæteris ♂, in specie Japonica terminales inter folia summa sessiles, flore ♀ unico terminali. Flores in utraque sub bracteis alternis solitarii, sessiles v. breviter pedicellati.

Species 2, altera boreali-Americana, altera Japonica. *Muell. Arg. in DC. Prod.* xvi. i. 21. *Baill. Monogr. Bux.* 55, *t.* 3. *Bot. Mag. t.* 1964. *Bot. Reg. t.* 33. *Lodd. Bot. Cab. t.* 910.

Tribus IV. Phyllantheæ.

L. 21? **Stenonia,** *Baill. Etud. Euph.* 578, *t.* 22.—Flores dioici, petaliferi. Calycis segmenta 5, valvata. Petala parva, spathulata, denticulata. Discus 5-lobus. Fl. ♂: Stamina 5, filamentis a basi liberis; antheræ erectæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 3-partitum. Fl. ♀: Ovarium 3-loculare; styli breves, 2-partiti, lobis ovoideis crassis crenulatis; ovula in loculis gemina. Fructus . . .—Arbor. Folia alterna, petiolata, integerrima, pennivenia. Flores ad nodos ramorum annotinorum fasciculati, pedicellati. (*Char. ex Baill. et Muell. Arg.*)

Species 1, ins. Comorensium Madagascariæ incola, a nobis non visa. *Muell. Arg. in DC. Prod.* xv. ii. 511.

22. **Bridelia,** *Willd. Spec.* iv. 978 (Briedelia). (Zarcoa, *Llanos in Mem. Acad. Cienc. Madr.* iv. 501, *ex char.* Candelabria, *Hochst. in Flora* 1843, 79.)—Flores monoici, petaliferi. Fl. ♂: Calycis segmenta 5, valvata. Petala 5, brevia, squamiformia, stipitata v. spathulata, lamina sæpius parva lata subdentata. Discus margine integer v. sinuatolobatus. Stamina 5, filamentis in medio disco basi in columnam connatis superne liberis patentibus; antherarum loculi paralleli, longitudinaliter dehiscentes. Ovarii rudimentum ad apicem columnæ styliforme v. divisum. Fl. ♀: Calycis segmenta quam in ♂ angustiora. Discus duplex, interiore annulari v. cupulato ovarii basin arcte cingente (an staminodia connata?). Ovarium 2-loculare v. rarissime hinc inde 3-loculare; styli distincti v. basi breviter connati, 2-lobi v. subintegri; ovula in loculis gemina. Bacca v. drupa parvula, indehiscens, exocarpio carnoso v. pulposo, endocarpio crustaceo v. parum indurato 2-pyreno v. abortu 1-pyreno. Semina in pyrenis abortu sæpius solitaria; albumen in plerisque speciebus carnosum, facie interiore late profundeque excavato; embryo cavitati albuminis parallelus, cotyledonibus latis tenuibus; in *B. retusa* tamen semina vidimus omnino *Cleistanthi*, albumine membranaceo, cotyledonibus crasso-carnosis altera majore minorem plicatam fovente.—Frutices arboresve. Folia alterna, petiolata, integerrima,

venis primariis pinnatis, secundariis transversis utrinque prominulis. Flores parvi, ad axillas glomerati, bracteis parvis squamiformibus stipati, ♂ numerosi subsessiles, ♀ pauciores v. solitarii, sæpius evidentius pedicellati. Baccæ v. drupæ globosæ v. ovoideæ, parvulæ, læves.

Species ad 25, Asiæ et Africæ tropicæ, insularum Mascarensium et Archipelagi Malayani, Australiæ et Novæ Caledoniæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 493. *Benth. Fl. Austral.* vi. 119. *Kurz, For. Fl. Brit. Burm.* ii. 366. *Roxb. Corom. Pl. t.* 171 *ad* 173 (*Cluytia*). *Bedd. Fl. Sylv. t.* 260. *Brandis, For. Fl. t.* 55.

23. **Cleistanthus,** *Hook. f. in Hook. Ic. Pl. t.* 779, *et Fl. Nigr. t.* 36. (Lebidiera, *Baill. Etud. Euph.* 581, *t.* 27, *Amanoæ* sect., pro genere proprio receptum a *Muell. Arg. in Linnæa* xxxii. 80. Leiopyxis, *Miq. Fl. Ind. Bat. Suppl.* 445.)—Flores monoici, petaliferi. Fl. ♂ : Calycis segmenta v. lobi 5, valvata. Petala 5, brevia, squamiformia, stipitata v. spathulata, lamina parva lata subdentata. Discus margine integer v. sinuato-lobatus. Stamina 5, filamentis in medio disco basi in columnam connatis superne liberis patentibus; antherarum loculi paralleli, longitudinaliter dehiscentes. Ovarii rudimentum ad apicem columnæ styliforme, divisum. Fl. ♀ : Calyx minus alte divisus quam in ♂, basi sub ovario cupulatus. Discus duplex, interiore annulari v. cupulato ovarii basin arcte cingente (an staminodia connata?). Ovarium 3-loculare ; styli distincti, 2-fidi ; ovula in loculis gemina. Capsula globosa v. depressa, 3-sulca, in coccos 2-valves dissiliens. Semina in coccis gemina v. abortu solitaria ; albumen sæpius parcum, interdum submembranaceum v. vix ullum ; cotyledones crasso-carnosæ v. rarius tenuiores, sæpius plus minus plicatæ.—Arbores fruticesve. Folia alterna, integerrima, coriacea, pennivenia, venis primariis minus conspicuis quam in *Bridelia* intra marginem arcuatis anastomosantibus, secundariis reticulatis. Flores parvuli, ad axillas foliorum dense glomerati, sessiles v. præsertim ♀ breviter pedicellati. Capsulæ basis in speciebus pluribus post coccos delapsos cum receptaculo indurata circa columellam persistit pateriformis.

Species ad 22, Asiæ et Africæ tropicæ, Madagascariæ, Archipelagi Malayani, Australiæ et Novæ Caledoniæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 504. *Benth. Fl. Austral.* vi. 121. *Kurz, For. Fl. Brit. Burm.* ii. 370. *Wight, Ic. t.* 1911 (*Amanoa*). *Roxb. Corom. Pl. t.* 169, 170 (*Cluytia*).

Genus *Brideliæ* affine quidem sed fructu et habitu bene distinctum, ab *Amanoa* calyce valvato et patria facile dignoscendum. Semina quoad crassitudinem albuminis et cotyledonum ut in illis variare videntur, et genera sequentia *Cleistantho* addenda videntur :—

Lebidieropsis, *Muell. Arg. in Linnæa* xxxii. 79, *et in DC. Prod.* xv. ii. 509, est *Cluytia collina*, Roxb., l.c., albumine carnoso etsi haud crasso, cotyledonibus crassis una longitudinaliter plicata altera majore leviter concava.

Nanopetalum, *Hassk. Hort. Bogor. Descr.* 65 : *Muell. Arg. in DC. Prod.* xv. ii. 510, est species Archipelagi Malayani a *Cleistantho* separata ob albuminis deficientiam, cotyledonibus crassis. In speciminibus Zollingeri n. 3777 albumen pertenue submembranaceum invenimus, cotyledonibus ut in pluribus *Cleistanthis* et in *Bridelia retusa* inæqualibus crasso-carnosis, una longitudinaliter plicata ab altera majore cincta.

24. **Amanoa,** *Aubl. Pl. Gui.* i. 256, *t.* 101.—Flores monoici, sæpius petaliferi. Fl. ♂ : Sepala 5, imbricata, parum inæqualia. Petala 5, brevia, squamiformia. Discus brevis. Stamina in disco 5, filamentis liberis crassis brevibus v. demum elongatis; antheræ crassæ, loculis distinctis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum columnare, teres v. 3-quetrum, apice 3-lobum. Fl. ♀ : Sepala quam in mare angustiora, petalis interdum obsoletis. Ovarium subglobosum, 3-loculare, stigmatibus 3 sessilibus crassis carnosis disciformibus; ovula in loculis gemina. Capsula demum indurata, in coccos 2-valves dissiliens. Semina in coccis abortu solitaria, nitida, media facie affixa, testa crustacea ; albumen tenue v. 0 ; cotyledones crassæ, carnosæ, radicula brevi.—Arbores fruticesve sæpius glabri. Folia alterna, coriacea, integerrima. Flores axillares, ♂ sessiles glomerati, ♀ solitarii v. pauci, pedicellati. Ramuli floriferi interdum foliis floralibus abortientibus racemos v. paniculas terminales simulant.

Species 6, Americæ et Africæ occidentalis inter tropicos incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 219, *in Mart. Fl. Bras.* xi. ii. 9, *t.* 1, *et in Flora* 1872, 2. *Planch. in Hook. Ic. Pl. t.* 797, *et in Hook. Fl. Nig. t.* 47.

Genera *Amanoa, Cleistanthus* et *Bridelia* in Prodromo in tribus duo distinctas separata, a Baillono in genus unicum junguntur et certe inter se valde affinia sunt. Characteres tamen uti habitus bene definiti videntur, et genera tria nobis servanda videntur.

25. **Discocarpus,** *Klotzsch in Wiegm. Archiv.* vii. 201, *t.* 9.—Flores dioici, sæpius petaliferi. Fl. ♂ : Sepala 5, rarius 4, membranacea, imbricata, exterioribus paullo minoribus. Petala totidem, parva, interdum deficientia. Discus membranaceus, cyathiformis v. cupulatus, 5-lobus. Stamina 5–4, filamentis in medio disco in columnam connatis, superne circa ovarii rudimentum 3-partitum liberis patentibus ; antherarum loculi paralleli, longitudinaliter dehiscentes. Fl. ♀ : Sepala quam in mare rigidiora. Discus crassior, patens, subinteger. Ovarium 3-loculare ; styli 3, distincti, superne recurvo-patentes, in laminam latam crenulatam dilatati, crenulis margine stigmatosis ; ovula in loculis gemina. Capsula dura, globosa, 3-cocca v. abortu 1–2-cocca, coccis 2-valvibus. Semina in coccis solitaria, testa crassa sæpius rugosa, membrana interna tenui ; albumen tenue v. 0 ; cotyledones latissimæ, valde contortuplicatæ.—Arbores divaricato-ramosæ. Folia alterna, brevissime petiolata, integerrima, coriacea, nitidula. Flores ad axillas dense glomerati, sessiles, ♂ numerosi, ♀ pauciores interdum solitarii. Capsulæ tomentosæ, cæterum læves v. molliter verrucoso-muricatæ.

Species 3, Brasiliæ et Guianæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 223, *et in Mart. Fl. Bras.* xi. ii. *t.* 2.

Rami apice spinescentes dicuntur quod in speciminibus nostris non apparet. Gemmæ axillares tamen, stipulis rigidis acutissimis involutæ, interdum spinas simulant. Arillum membranaceum circa semina ab auctoribus descriptum haud invenimus.

26. **Lachnostylis,** *Turcz. in Bull. Soc. Imp. Nat. Mosc.* 1846, 503.—Flores dioici, petaliferi. Fl. ♂ : Sepala 5, membranacea, imbricata, subæqualia. Petala 5, vix breviora. Discus latus, villosissimus. Stamina 5, filamentis in medio disco ad medium in columnam glabram connatis, superne circa rudimentum ovarii villosum 3-partitum liberis patentibus ; antherarum loculi paralleli, longitudinaliter dehiscentes. Fl. ♀ : Calyx et petala maris. Discus parum prominulus. Ovarium globosum, dense villosissimum, 3-loculare ; styli breves, plani, recurvo-patentes, cuneati, breviter 2-fidi ; ovula in loculis gemina. Capsula in coccos 2-valves dissiliens, pericarpio crassiuscule crustaceo. Semina subglobosa, lævia, testa crassiuscule membranacea ; albumen tenue ; cotyledones latissimæ, valde contortuplicatæ.—Frutex ramosissimus. Folia parvula, alterna, coriacea, integerrima. Flores tomentoso-villosi, ad axillas fasciculati, ♂ breviter pedicellati v. subsessiles, ♀ pauciores interdum solitarii, pedicellis longiusculis.

Species 1, Africæ australis incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 224. *Hook. Ic. Pl. t.* 1279.

Genus quoad characteres essentiales vix a *Discocarpo* separandum, distinguitur patria, habitu, et disco.

27. **Actephila,** *Blum. Bijdr.* 581. (Anomospermum, *Dalz. in Hook. Kew Journ.* iii. 228, *non Miers.*)—Flores monoici v. interdum forte dioici, sæpius petaliferi. Fl. ♂ : Sepala 5–6, subæqualia v. interiora paullo majora, imbricata. Petala totidem, sub disco parva squamiformia v. 0. Discus expansus, integer v. 5-lobus. Stamina 3–6, in medio disco circa ovarii rudimentum 2–3-fidum affixa, filamentis liberis v. sub rudimento breviter connatis ; antherarum loculi paralleli, introrsum v. demum filamento recurvo extrorsum rima longitudinali dehiscentes. Fl. ♀ : Calyx et petala maris. Ovarium in disco sessile, 3-loculare ; styli breves, liberi v. basi connati, indivisi v. 2-fidi ; ovula in loculis gemina. Capsula dura, loculicide 3-valvis v. in coccos 2-valves dissiliens. Semina sæpius in coccis solitaria, majuscula, testa fragili ; albumen perparcum v. 0 ; cotyledones crassæ, carnosæ, interdum valde dilatatæ, sibi invicem plicatæ v. valde contortuplicatæ.—Arbores fruticesve. Folia alterna, petiolata, sæpius ampla, integerrima, demum coriacea. Flores ad axillas

glomerati, ♂ sæpius plures breviter nunc brevissime pedicellati, ♀ solitarii v. cum ♂ pauci, longius pedicellati et sæpe majores.

Species ad 10, Indiæ orientalis Archipelagi Malayani et Australiæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 221. *Benth. Fl. Austral.* vi. 88. *Kurz, For. Fl. Brit. Burm.* ii. 340. *Baill. Adans.* vi. *t.* 10. *Wight, Ic. t.* 1910.

Lithoxylon, *Endl. Gen.* 1122, genus ad *Securinegam nitidam*, Lindl. Collect. t. 9, non Willd., in hortis e seminibus Taitensibus cultam propositum, habitu floribusque omnino *Actephilæ* convenit, sed seminibus indescriptis adhuc dubium remanet. *L. grandifolium*, Muell. Arg. ex Australia, rite a Baillono ad *Actephilam* refertur.

28. **Wielandia**, *Baill. Etud. Euph.* 568, *t.* 22.—Flores monoici, petaliferi. Fl. ♂ : Calyx alte 5-fidus, lobis imbricatis. Petala lata, calyce longiora. Discus 5-angulatus. Stamina 5, petalis alterna, filamentis in columnam crassam connatis apice breviter liberis mox recurvis ; antheræ primum erectæ mox recurvæ, loculis parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum columnam stamineam terminans, vertice planum, inter stamina radiatim 5-lobum. Fl. ♀ : Calyx et petala maris. Discus cupularis, ovarium cingens. Ovarium 5-loculare ; styli recurvo-patentes, apice breviter 2-lobi ; ovula in loculis gemina. Capsulæ loculi 2-valves, abortu 1-spermi.—Frutex elatior, glaber. Folia alterna, petiolata, integerrima, coriacea, tenuiter penninervia et reticulata. Flores ad axillas fasciculati, pauci, ♂ breviter ♀ longe pedicellati, ramulis floriferis interdum ob folia floralia diminuta racemulos simulantibus.

Species 1, insularum Seychellarum incola. *Muell. Arg. in DC. Prod.* xv. ii. 228 (*Saviæ sect.*). Specimen nostrum imperfectum a Bakero Fl. Maurit. 291, sub *Mespilodaphne* notatur. Char. supra datus præcipue ex Baill. l. c.

29. **Savia**, *Willd. Spec.* iv. 771.—Flores dioici v. monoici, sæpius petaliferi. Discus varius. Fl. ♂ : Sepala 5, subæqualia, imbricata. Petala parva v. calycem superantia. Stamina 5, petalis alterna, filamentis liberis v. ima basi receptaculo adnatis ; antheræ erectæ, loculis parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum sæpius breve, 3-fidum. Fl. ♀ : Sepala et petala maris. Ovarium 3-loculare ; styli distincti, superne patentes, 2-fidi, ramis crassiusculis v. tenuibus ; ovula in loculis gemina. Capsula in coccos 2-valves dissiliens, endocarpio crustaceo v. parum indurato. Semina ovoidea v. 3-quetra, testa crustacea v. crassiuscule membranacea ; albumen carnosum, crassum v. tenue ; cotyledones latæ, planæ v. leviter plicatæ, radicula sæpe obliqua.—Frutices glabri. Folia alterna, integerrima, rigidule membranacea v. subcoriacea, penninervia. Flores axillares, ♂ dense glomerati, subsessiles, ♀ solitarii v. pauci, breviter v. longe pedicellati.

Species ad 10, quarum 4, genuinæ, Indiæ occidentalis incolæ, floribus dioicis, petalis parvis squamiformibus v. 0. *Muell. Arg. in DC. Prod.* xv. ii. 230. *A. Juss. Euph. Tent. t.* 2. *Baill. Etud. Euph. t.* 26. *A. Rich. Fl. Cub. t.* 70 (*Phyllanthus*). His addiderunt Baillon et Muell. Arg. species 5 Madagascarienses monoicas, petalis calycem æquantibus v. subsuperantibus, quæ in sectiones (v. prius genera) 2, Petalodiscus, *Baill. Etud. Euph.* 571. *t.* 22, et Charidia, *Baill. l. c.* 572, ob differentias parvas in disco v. stylis distinctas distribuuntur. Sectionem *Wielandiam*, Muell. Arg., ducente Baillono, pro genere proprio retinemus.

Gonatogyne, *Klotzsch*; *Muell. Arg. in Mart. Fl. Bras.* xi. ii. 13, species austro-Brasiliensis imperfecte nota, ex speciminibus nostris fructiferis et charactere dato, videtur *Saviæ* species *S. dusiæfoliæ*, Griseb., proxime affinis, certe non *Amanoæ* species.

30. **Andrachne**, *Linn. Gen. n.* 1095.—Flores monoici, sæpius petaliferi. Fl. ♂ : Calycis segmenta v. lobi 5–6. Petala breviora v. rarius subæquilonga. Disci glandulæ v. lobi numero petalorum æquales iisque oppositi v. duplo plures. Stamina 5–6, petalis alterna, filamentis liberis ; antheræ erectæ, loculis parallelis distinctis longitudinaliter dehiscentibus. Ovarii rudimentum parvum. Fl. ♀ : Calycis segmenta sæpius quam in ♂ majora. Petala minuta v. 0. Ovarium 3-loculare ; styli breves, angusti, 2-fidi v. 2-partiti ; ovula

in loculis gemina. Capsula sicca, in coccos 2-valves dissiliens. Semina curvula, rugosa, estrophiolata; albumen carnosum; embryo curvulus, radicula longiuscula, cotyledonibus planis latis.—Herbæ suffruticesve diffusi v. frutices tenuiores. Folia alterna, petiolata, membranacea, sæpe parva. Flores ad axillas pedicellati, ♂ sæpius fasciculati, ♀ solitarii.

Species 10, per varias regiones late dispersæ, a Muell. Arg. in sectiones 6 distributæ quarum pleræque species singulæ sunt glandulis disci plus minus evolutis v. connatis parum distinctæ. *Muell. Arg. in DC. Prod.* xv. ii. 233. *Nees, Gen. Fl. Germ. Monochl. n.* 39. *Reichb. Ic. Fl. Germ. t.* 153. *Sibth. Fl. Gr. t.* 953. *Eichw. Pl. Cauc. Casp. t.* 20.

Eraclissa, *Forsk. Fl. Æg. Arab.* 208 (*Telephioides* et *Sclerandrachne*, Muell. Arg.) species continet typicas Europæas et Orientales. *Pseudophyllanthus* est species Capensis. Lepidanthus, *Nutt. in Trans. Amer. Phil. Soc.* v. 175, est species boreali-Americana. Phyllanthidia, *Didrichs. in Vidensk. Meddel. Nat. For. Kjobenh.* 1857, 150, species Peruviana, nobis ignota est. Arachne, *Neck. Elem.* ii. 348 (Leptopus, *Dcne. in Jacquem. Voy. Bot.* 155, *t.* 156), species continet 4 Asiaticas a cæteris paullulum diversas, foliis floribusque majoribus, disco in glandulas numero petalorum duplo plures diviso. *Kl. in Waldem. Reise, t.* 24 (*Phyllanthus*).

31. **Agyneia,** *Vent. Jard. Cels. t.* 23. (Diplomorpha, *Griff. Notul.* iv. 479.)—Flores monoici, apetali. Discus 0. Fl. ♂: Sepala 6, imbricata, subæqualia, sub-2-seriata, punctata, medio crassiuscula quasi squama adnata aucta, margine albo-membranaceo cincta. Stamina 3, filamentis in centro floris in columnam connatis; antheræ circa apicem columnæ subsessiles, loculis parallelis extrorsum longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Sepala acuta, immarginata. Ovarium ovoideum, 3-loculare, vertice truncatum, mox concavum; styli brevissimi, erecto-patentes, alte 2-fidi; ovula in loculis gemina. Capsula ovoidea, loculicide dehiscens v. demum in coccos 2-valves dissiliens. Semina curvula, hilo longo laterali; albumen carnosum; embryo curvulus, cotyledonibus latis planis.—Herbæ annuæ v. basi indurescentes, ramis rigidulis diffusis v. patentibus sæpe angulatis. Folia alterna, parvula, integerrima. Flores axillares, ♂ sæpius plures glomerati, minuti, breviter pedicellati, ♀ solitarii, majores longiusque pedicellati. Bracteæ ad basin pedicellorum interdum ∞, stipuliformes.

Species (v. varietates?) 2, Indiæ orientalis, Archipelagi Malayani et insularum Mascarensium incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 238. *A. Juss. Euph. Tent.* 24, *t.* 6. *Wight, Ic. t.* 1893.

Genus vix a *Phyllanthi* sectione *Synostemo* differt, perianthii ♂ segmentorum disco incrassato quasi squama adnata instructo. Hæ squamæ tamen, ut in *Sauropo*, a receptaculo floris omnino distinctæ sunt.

32. **Sauropus,** *Blume, Bijdr.* 595. (Ceratogynum, *Wight, Ic.* v. ii. 26, *t.* 1900.)—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx sæpius alte divisus; segmenta 6, sub-2-seriata, basi nunc leviter incrassata, nunc squamellis supra columnam stamineam conniventibus aucta. Stamina 3, filamentis in centro floris in columnam brevem crassam connatis v. apice breviter liberis patentibus; antheræ sub apice truncato v. peltato columnæ sessiles v. subsessiles, loculis distinctis parallelis extrorsum dehiscentibus. Ovarii rudimentum (præter columnæ apicem) 0. Fl. ♀: Calyx quam in ♂ minus divisus et interdum rotato-expansus brevissime tantum sinuato-lobatus, lobis basi vix v. parum incrassatis. Ovarium ovoideum v. depresso-globosum, vertice truncatum v. concavum; styli brevissimi, patentes, liberi v. basi adnati, 2-fidi v. 2-partiti; ovula in loculis gemina. Capsula depresso-globosa, in coccos 2-valves dissiliens. Semina in coccis sæpius gemina; albumen carnosum; embryo rectus v. vix incurvus, cotyledonibus planis latis.—Fruticuli rarius suffrutices, habitu *Phyllanthi*, foliis alternis distichis membranaceis integerrimis. Flores ad axillas fasciculati, in quaque axilla haud numerosi, omnes pedicellati, ♂ minuti, ♀ in eadem v. in distincta axilla solitarii v. rarius 2, longius pedicellati.

Species descriptæ 14, Indiæ orientalis, Archipelagi Malayani (et Novæ Caledoniæ?) incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 240. *Baill. Etud. Euph. t.* 27. *Wight, Ic. t.* 1951, 1952. Calycis lobi v. segmenta et appendices baseos in fl. ♂ variant fere de specie in speciem, et genus nequaquam in sectiones distinctas dividere possumus. Segmentorum appendices pro disci lobis descriptæ sunt, sed nobis semper videntur calyci solo affixæ, a receptaculo floris omnino distinctæ.

33. **Cluytiandra**, *Muell. Arg. in Seem. Journ. Bot.* 1864, 328, *et in DC. Prod.* xv. ii. 225.— Flores monoici, apetali. Discus 0. Fl. ♂: Calyx 5-fidus, lobis basi squamula parva auctis. Stamina 5, filamentis in centro floris basi in columnam connatis superne liberis; antherarum loculi paralleli, longitudinaliter dehiscentes. Ovarii rudimentum 0 (v. ad apicem columnæ inter stamina parvum 3-partitum, *Muell. Arg.*). Fl. ♀: Calyx quam in ♂ minus alte divisus. Ovarium 3-loculare, vertice truncatum; styli breves, patentes, 2-fidi; ovula in loculis gemina. Capsula in coccos 2-valves dissiliens. Seminum albumen carnosum, cotyledones planæ latæ.—Frutex habitu *Sauropodis*. Folia alterna, disticha, membranacea, integerrima, pennivenia. Flores ad axillas fasciculati, ♂ minuti, breviter pedicellati, ♀ sæpius in eadem axilla solitarii, pedicello elongato.

Species 1, Africæ tropicæ occidentalis incola, a Baillono ad *Andrachnem* relata, sed petalorum absentia et squamellis ad basin perianthii potius *Sauropodi* affinis videtur, et vix nostro sensu ab eo separanda, filamentis superne liberis et ovarii rudimento in fl. ♂ ex Muell. Arg. evoluto. Hoc tamen in floribus minutis in speciminibus nostris vix perfectis haud deteximus.

34. **Phyllanthus**, *Linn. Gen. n.* 1050. — Flores monoici rarissime dioici, apetali. Discus varius v. 0. Fl. ♂: Sepala 6, 5 v. rarius 4, distincta v. rarius basi breviter connata, imbricata, plus minus distincte 2-seriata, omnia similia herbacea v. subpetaloidea v. exteriora breviora. Stamina in centro floris 3, rarius 2 v. 5 v. rarissime 6 ∞, filamentis liberis v. in columnam centralem connatis; antherarum loculi nunc distincti paralleli longitudinaliter dehiscentes nunc divergentes quoad connectivum oblique v. subtransversim 2-valvati v. horizontaliter in unum confluentes. Ovarii rudimentum 0. Fl. ♀: Calyx maris v. rigidior. Ovarium 3–∞-loculare; styli distincti v. plus minus connati, integri v. sæpius 2-fidi, erecti v. recurvo-patentes, subulati v. plano-dilatati, superne introrsum v. margine stigmatosi; ovula in loculis gemina. Capsula sicca v. carnosa, demum sæpissime in coccos 2-valves dissiliens, rarius loculicida v. vix dehiscens. Semina (dum omnia perfecta) transversim 3-angularia, dorso convexa, angulo interiore recta, estrophiolata, testa membranacea v. crustacea; albumen carnosum; embryo rectus v. leviter incurvus, cotyledonibus planis rectisque v. rarius flexuosis.—Herbæ frutices v. arbores, habitu vario. Folia integerrima, alterna v. rarissime opposita, sæpius disticha, ramulis folia pinnata haud raro simulantibus. Flores parvi, axillares v. rarius ad nodos ramulorum aphyllorum, ♂ sæpius ∞ glomerati, subsessiles v. distincte pedicellati, rarius pauci rarissime solitarii, ♀ in eadem axilla v. in ramulo distincto pauci v. solitarii, longius pedicellati.

Species enumeratæ ad 450, per regiones calidiores utriusque orbis latissime dispersæ, in temperatis rariores, in Europa et Asia Rossica desunt, in America boreali perpaucæ inveniuntur, et paucæ tantum in Africa australi et Australia extratropica crescunt. *Muell. Arg. in DC. Prod.* xv. ii. 275, *et in Mart. Fl. Bras.* xv. ii. 25, *t.* 8 *ad* 10. *Benth. Fl. Austral.* vi. 93.

Genus numero specierum vix *Crotoni* cedens, et difficillime in sectiones naturales dividendum, etsi diversitates insignes ostendit in disco, in calyce, in filamentorum antherarum v. stylorum numero v. evolutione, et a pluribus auctoribus in genera plurima divellitur. Mueller Argoviensis sectiones 44 in Prodromo distinxit, quibus addidit 2 in Flora Brasiliensi; plures tamen sunt potius species singulæ charactere uno alterove parum abnormes, et majores, exceptis *Glochidio Synostemone et Xylophyllo*, vix naturales; species nonnullæ, e.g. *Euphyllanthi* v. *Paraphyllanthi*, speciebus in altera sectione separatis similiores sunt quam illis in eadem sectione inclusis. Cæterum divisiones sequentes, a pluribus genera propria nuncupata, insigniores sunt.

* *Discus in utroque sexu deficiens.*

1. *Glochidium.* Arbores fruticesve gerontogei, foliis sæpius coriaceis majusculis v. amplis. Stamina 3–∞, antheris erectis in columna centrali sessilibus. Ovarium 3–∞-loculare; styli breves crassi, erecti, basi sæpe connati. Species enumeratæ ultra 100, plures tamen ægre distinguendæ, Asiæ tropicæ, Archipelagi Malayani, Australiæ et insularum maris Pacifici incolæ. Phyllanthi series 1, *Muell. Arg. in DC. Prod.* xv. ii. 275. Glochidion, *Forst. Char. Gen.* 113, *t.* 57. *A. Juss. Euph. Tent. t.* 3. *Kurz, For. Fl. Brit. Burm.* ii. 341. *Wight, Ic. t.* 1906 *ad* 1908. Bradleia, *Gærtn. Fruct.* ii. 127, *t.* 109. *Labill. Sert. Austr. Caled. t.* 76 *ad* 78. *Cav. Ic. t.* 371. Gynoon, *A. Juss. Euph. Tent.* 17, *t.* 3. *Wight, Ic. t.* 1909. Glochisandra, *Wight, Ic.* v. ii. 28, *t.* 1905. Lobocarpus, *W. et Arn. Prod. Fl. Penins.* 7. Glochidionopsis, *Blume, Bijdr.* 588.

In *P. obscuro*, Willd., affinibusque capsula dura dense tomentosa subglobosa non sulcata tardius a basi breviter dehiscens; in speciebus nonnullis (e.g. *P. ramifloro*) fructus fere *Fluggeæ* nisi 5–6-merus, pericarpio maturo irregulariter rupto; semina ut videtur pulpo immersa, testa nitida crustacea ventre duplicata inter laminas cava.

2. *Synostemon*. Suffrutices v. herbæ perennes Australienses, foliis parvis. Stamina 3, antheris erectis columnæ centrali adnatis. Ovarium 3-loculare; styli distincti v. basi connati. Species enumeratæ 12. *Benth. Fl. Austral.* vi. 97. SYNOSTEMON, *F. Muell. Fragm. Phyt. Austral.* i. 32.

** *Discus evolutus v. rarius in uno sexu deficiens. Capsula carnosa v. baccata.*

3. *Cicca*. Arbores fruticesve. Ramuli floriferi imprimis ♂ sæpe aphylli racemos simulante inflorescentia tamen interdum normalis. Sepala et stamina sæpissime 4, filamentis liberis. Ovarium sæpius 4- v. 2-loculare; styli patentes. Species paucæ, gerontogeæ et Americanæ tropicæ, quarum typica Asiatica in America inquilina inflorescentia sæpius aphylla v. paucifoliata, CICCA, *Linn. Mant. n.* 1275. *Kurz, For. Fl. Brit. Burm.* ii. 351. TRICARYUM, *Lour. Fl. Cochinch.* 557. STAUROTHYRAX, *Griff. Notul.* iv. 476. Species 3 v. 4, Americanæ, florum glomerulis ad normam generis axillaribus. WURTZIA, *Baill. Adans.* i. 186, *t.* 7.

PROSORUS, *Dalz. in Hook. Kew Journ.* iv. 345, *Thwaites in Hook. Kew Journ.* vi. *t.* 10, *et* CALOCOCCUS, *Kurz ex Teijsm. et Binnend. in Batav. Natuurk. Tijdschr.* xxvi. 48, ob flores 4-meros a Muell. Arg. in sectione *Cicca* includuntur, sed ovarium 3-merum et capsula sicca potius *Paraphyllanthum* indicant.

Hedycarpidium, est *P. javanicus*, Muell. Arg., qui a *Cicca* differre dicitur staminibus monadelphis. Fructus tamen indescriptus est.

4. *Kirganelia*. Frutices habitu *Phyllanthi* normalis. Stamina 5, filamentis sæpe nec semper plus minus connatis. Ovarium 3–∞-loculare; styli patentes, distincti v. basi connati. Species omnes gerontogeæ. KIRGANELIA, *A. Juss. Euph. Tent.* 21, *t.* 4.

ANISONEMA, *A. Juss. Euph. Tent.* 19, *t.* 4, *Wight, Ic. t.* 1899, ob stamina 5, sæpe inæqualia 3 cæteris longiora v. altius connata, et PELTANDRA, *Wight, Ic.* v. 24, *t.* 1891, 1892, staminibus 5 æqualibus, filamentis ad medium connatis, ad *Kirganeliam* referantur, sed capsula sicca potius *Paraphyllanthi*.

Fluggeopsis, est *P. fluggeiformia*, Muell. Arg. (*P. glaucus*, Wall. Cat. n. 5927), species Nepalensis staminibus ut in *Peltandra* 5 æqualibus, filamentis liberis, antheris *Paraphyllanthi*, fructu ignoto verisimiliter capsulari. *Kirganeliæ* duæ Blancoi in Prodromo memoratæ errore typographico sub *Fluggeopside* collocatæ sunt.

5. *Emblica*. Stamina sæpius 3 et antheræ erectæ loculis parallelis *Paraphyllanthi*. Ovarium 3-loculare, stylis connatis. Species Asiatica, *Brand. For. Fl. t.* 52. *Bedd. Fl. Sylv.* t. 258. EMBLICA, *Gærtn. Fruct.* ii. 122, *t.* 108. *Wight, Ic. c.* 1896. DICHELACTINA, *Hance in Walp. Ann.* iii. 375. Mueller Arg. in Prodromo sub sectione *Emblica* species plures includit habitu vario, fructu sicco v. subcarnoso, stylis in omnibus plus minus in columnam connatis apice tantum liberis divergentibus nec a basi liberis ut in *Paraphyllantho*.

*** *Discus evolutus. Capsula sicca.*

6. *Emblicastrum*. Stamina 3–4, filamentis brevissimis; antheræ didymæ *Paraphyllanthi*. Ovarium 3-loculare, stylis in columnam longam apice brevissime 3-lobam connatis. Species unica ex ins. Madura Archipelagi Malayani, a Teijsm. et Binnend. Cat. Hort. Bogor. 229, sub *Scepasmate parvifolio* enumerata, rite a Muell. Arg. in Prod. 324 ad *Phyllanthum* relata, etsi pluribus notis in genere singularis. Habitus quam in *Emblica* rigidior, fere *P. pulchri*, Wall. v. *P.* (*Scepasmatis*) *buxifolii*, Muell. Arg. Flores in axillis solitarii, subsecundi, intra bracteas 3 (bractea cum bracteolis) minimas latas laceras sessiles, ♂ minimi sepalis 4 latis membranaceis, ♀ majores sepalis 5 rigidis erectis lanceolatis, quod in nulla alia specie observatur. Discus hypogynus denticulatus. Styli columna ovario triplo saltem longior.

7. *Williamia*. Arbusculæ Cubenses. Stamina 10–15, antheris erectis in columna centrali sessilibus distinctis loculis parallelis. Ovarium 3-loculare, stylis v. stigmatibus subsessilibus unilateraliter peltiformibus patentibus inciso-lobatis. WILLIAMIA, *Baill. Etud. Euph.* 559, *t.* 27.

8. *Paraphyllanthus*. Frutices v. herbæ habitu variæ amphigeæ. Stamina 3, rarissime 2 v. 4–6, filamentis liberis v. plus minus connatis, antheris erectis distinctis, loculis parallelis longitudinaliter dehiscentibus. Ovarium 3-loculare; styli patentes, distincti v. basi breviter connati, sæpius plus minus bifidi. Species præsertim in orbe vetere numerosæ. *Wight, Ic. t.* 1895. *Labill. Pl. Nov. Holl. t.* 225. *Wawra in Pr. Maxim. Reise, Bot. t.* 46. *Muell. Arg. in Mart. Fl. Bras.* xi. ii. *t.* 3, *f.* 2, *t.* 7, *f.* 1. Sectio minime naturalis, ab *Euphyllantho* propter antherarum indolem separata, etiam sequentes *Prodromi* facile includit.

Hemicicca, *Baill. Etud. Euph.* 645, species Japonica, sepalis sæpe nec in omnibus floribus ad 4, staminibus ad 2 reductis. Styli indivisi, sed in *Paraphyllantho* quoad divisionem valde diversi.

Pseudomenarda, est *P. purpureus*, Muell. Arg., species Africana, stylis brevibus latis crassis more sectionis patentibus sed basi brevissime connatis.

Microglochidion, species continet 2 Guianenses, stylis (a speciminibus nostris jam delapsis) ex Muell. Arg. ut in *Hemicicca* indivisis.

Ciccastrum, species Brasiliensis, a *Microglochidio* distincta filamentis basi connatis. *Muell. Arg. in Mart. Fl. Bras.* xi. ii. *t.* 4.

Orbicularia, *Baill. Etud. Euph.* 616, species paucæ Indiæ occidentalis, staminibus sæpe 6. Cætera *Paraphyllanthi*.

Catastylum, species Jamaicensis magna, foliis amplis coriaceis, ramulis floriferis aphyllis ad ramos vetustos racemiformibus. Inflorescentia *Ciccæ*. Capsula sicca videtur cæteraque *Paraphyllanthi*.

9. *Euphyllanthus*. Herbæ fruticesve rarius arborescentes, foliis sæpius parvis v. membranaceis distichis, habitu tamen vario. Stamina in speciebus typicis 3, in aliis 5–6 v. 2, filamentis liberis v. plus minus connatis; antheræ distinctæ v. rarius confluentes divergentes v. reflexæ, loculis obliquis divergentibus v. horizontaliter divaricatis distinctis v. confluentibus. Ovarium 3-loculare; styli liberi v. breviter connati. Capsula sicca. Species in utroque orbe numerosæ. *Wight. Ic. t.* 1894. *Miq. Stirp. Surin. t.* 31. *Muell. Arg. in Mart. Fl. Bras.* xi. ii. *t.* 6. *f.* 1, *t.* 7. *f.* 2, *t.* 8. 9. *Vell. Fl. Flum. Ic.* x. *t.* 16. 17 (*passim*). *Lodd. Bot. Cab. t.* 116. Conami, *Aubl. Pl. Gui.* ii. 926, *t.* 354. Macraea, *Wight, Ic.* iv. ii. 27, *t.* 1901, 1902. Synexemia et Geminaria, *Rafin.* ex *Muell. Arg.* Genera sequentia auctorum v. sectiones Prodromi sub *Euphyllantho* includenda videntur.

Mebourea, *Aubl. Pl. Gui.* ii. 825, *t.* 323 (Rhopium, *Schreb. Gen. Pl.* 608. Tephranthus, *Neck. Elem.* ii. 235), est species Guianensis, filamentis superne liberis, antheris ab apice filamenti v. a connectivo prominente valde divaricatis fere reflexis.

Cathetus, *Lour. Fl. Cochinch.* 607, ex charactere dato a Seemannio et a Muell. Arg. confirmato, est *P. cinerascens*, Hook. et Arn.; Seem. Bot. Her. t. 97 (*P. fasciculatus*, Muell. Arg.) in Prodromo pro sectione distinctus antheris ab apice pendulis nec a basi erectis. Antheræ tamen, in icone citata haud bene delineatæ, nobis videntur ut in cæteris *Euphyllanthis* basi nec apice affixæ, angulo recto divergentes v. plus minus reflexæ.

Anisolobium, est *P. Welwitschianus*, Muell. Arg., ex Africa tropica, andrœcio omnino *Catheti*, sed sepala interiora exterioribus duplo longiora.

Chramanthus, *Hassk. Cat. Hort. Bogor.* 240. est *P. gracilis*, Baill., andrœcio fere *Catheti*, sed pro sectione distinctus disco in utroque sexu maximo urceolato.

Menarda, *A. Juss. Euph. Tent.* 23, *t.* 6, species continet Africanas v. Mascarenses, ab *Euphyllantho* distinctas staminibus sæpius 5, nec 3, quod revera in *P. pentandro*, Schum., aliisque observavimus, in speciminibus tamen Africanis a Muell. Arg. ad *P. tenellum* relatis sæpe 3 tantum invenimus. Muell. Arg. in Mart. Fl. Bras. xi. ii. 30, t. 6, f. 2, speciem addidit Brasiliensem floribus ♂ 5-meris 5-andris.

Asteranda, *Klotzsch in Wiegm. Archiv.* vii. 200, species 2 includit ex America tropica, staminibus vulgo 6 (rarius paucis v. usque ad 9), filamentis ad apicem in columnam connatis, antheris radiato-patentibus v. demum reflexis. Styli in columnam brevem connati, apicibus stigmatosis patentibus petaloideo-dilatatis.

Oxalystylis, est species Americana, *P.* (*Asterandræ*) *grandifloro* quam maxime affinis, stylis tamen infra dilatationem stigmatosum longioribus.

Ciccopeltandra, est species Brasiliensis, antheris *Euphyllanthi* sed 5 nec 3, floribus ♀ fructuque ignotis.

Hemiphyllanthus, species continet paucas Americanas, inter se habitu valde dissimiles, ab *Euphyllantho* separatas ob stylos plus minus connatos integros v. vix 2-lobos.

In *P. cyclanthera* affinibusque ex India occidentali, antheræ (2 v. 3?) circa apicem columnæ brevis sessiles, loculis omnibus in unam circularem confluentibus.

Epistylium, *Swartz, Fl. Ind. Occid.* 1095, *t.* 22, species 2 continet Jamaicenses a nobis non visas, 2-andras, racemis axillaribus v. ut in *Catastylio* in ramis vetustis lateralibus, stylis longe in columnam connatis. Grisebach *E. cauliflorum*, Sw. in *P.* (*Catastylio*) *cladantho*, Muell. Arg. agnovit, perperam tamen ex Muell. Arg., qui speciem veram Swartzii vidit.

10. *Reidia*. Frutices sæpe arborescentes, foliis sæpius parvis v. membranaceis. Sepala sæpius in floro ♂ 4, in flore ♀ 4–6. Stamina 2, antheris ad apicem columnæ sessilibus, loculis disjunctis

cruciatim dispositis antheras 4 uniloculares simulantibus. Ovarium 3-loculare; styli 3, distincti. Species omnes gerontogeæ. REIDIA, *Wight, Ic.* v. 27, *t.* 1903, 1904.

ERIOCOCCUS, *Hassk. Cat. Hort. Bog.* 242, nomen a Muell. Arg. ad sectionem totam extensum, ab auctore affixum fuit ad species ovario capsulaque lanatis; *Reidia*, Wight, includit etiam species ovario capsulaque glabris.

Eriococcoides, Muell. Arg., est *P. acutissimus*, Miq., antherarum loculis parallelis v. leviter divergentibus, cæterum more *Reidiæ* cruciatim affixis. In *Reidiis* typicis antherarum loculi ut in *Euphyllantho* breves divergentes.

NYMPHANTHUS, *Lour. Fl. Cochinch.* 543, nobis ignotus, ab *Eriococcoide* differre dicitur ovario 6-loculari, ex auctore tamen 3-loculare est, et character *Euphyllantho* convenit etsi auctor etiam speciem *Paraphyllanthi* includat.

SCEPASMA, *Blume, Bijdr.* 582, *Baill. Etud. Euph. t.* 25, species unica ex Archipelago Malayano, a *Reidia* non differt nisi pistillo 5–8-mero. Habitus *P. pulchri*, Wall.

P. elegans, Wall. affinésque, insignes sunt sepalis margine fimbriatis. *P. macrocalyx*, Muell. Arg., calyce fructifero valde aucto foliaceo ab omnibus *Asiaticis* distinguitur. calyx fructifer pariter auctus foliaceus observatur etiam in speciebus paucis Australiensibus v. Novo-Caledonicis aliarum sectionum.

11. *Xylophylla.* Frutices aphylli, ramulis compressis linearibus v. sæpius valde dilatatis, nodis floriferis marginalibus dentiformibus. Characteres florales et carpici modo *Paraphyllanthi* modo *Euphyllanthi.* Species omnes Americanæ. *Muell. Arg. in Mart. Fl. Bras.* xi. ii. *t.* 10. XYLOPHYLLA, *Schreb. Gen. Pl.* 200. *Gærtn. Fruct. t.* 108. *Jacq. Hort. Schœnbr. t.* 348. *Bot. Mag. t.* 1021, 2652. *Bot. Reg. t.* 373. GENESIPHYLLA, *L'Hér. Sert. Angl.* 29. *Choretropsis* a Muellero pro sectione separatur ob ramulos teretes tenues, nodis floriferis vix immersis. Species unica Brasiliensis.

Supersunt species Novo-Caledonicæ ad 18 in Prodromo in sectiones 7 distributæ quas rite examinare in speciminibus nostris sæpe floribus perpaucis donatis nequivimus. Nonnullæ habitum præbent *Glochidii* et discus pariter deest sed styli subpatentes videntur, in plerisque disci glandulæ plus minus evolvuntur. In *Gomphidio*, Baill., perianthii segmenta interiora ut in *Anisolobio* exterioribus conspicue longiora. In *P. æneo*, Baill., discus ex Muell. Arg. evolutus est quod a Baillono negatur. Flores ♂ 2 examinavimus, in uno glandulas minutas vidimus, in altero nullas deteximus. Cæterum hæ omnes species in collectione Novo-Caledonica ditissima Musei Parisiensis ulterius elaborandæ.

Formæ abnormes in genere insigniores observantur ramulis floriferis brevibus tenuibus aphyllis racemulos axillares simulantes in *P. Martii*, Muell. Arg., paucisque aliis, et pariter racemiformibus ad ramos vetustos lateralibus in *P. disticho*, Muell. Arg. (*Cicca disticha*, Linn.), *P. caulifloro* (*Epistylio*, Sw.), *P. cladantho*, Muell. Arg., aliisque paucis. In his tamen flores secus rhachin dense glomerati nec ut in *Antidesmate* affinibusque sparsi v. bracteis fulti, et racemuli ♀ interdum in ramulos foliatos excrescunt. In *P. bæobotryoide*, Muell. Arg., tamen racemi ♂ stricte axillares simplices tenuesque. Folia opposita observantur in speciebus paucis Novo-Caledonicis et in *P. oppositifolio*, Baill., ex ins. Mascarensibus. In *P. fluitante*, Spruce (sub hoc nomine jam in herbariis a Muellero examinatis signato), caules brevissimi, fluitantes, foliis supra aquam expansis habitu *Salviniæ*.

P. verrucosus, Thunb., seu sectio *Pleiostemon*, Muell. Arg., nobis videtur ad *Securinegam* referendus, *P. congestus*, Muell. Arg., ab auctore ipso serius ad *Securinegam* translatus est. *P. Wightianus*, Muell. Arg. (CHORIZANDRA, *Wight, Ic.* vi. 13, *t.* 1904) vix a *Fluggea obovata* differt, ovarii rudimento (an revera ?) deficiente.

35. **Leptonema**, *A. Juss. Euph. Tent.* 19, *t.* 4.—Flores dioici, apetali. Discus 0. Fl. ♂: Calyx 5-partitus, segmentis imbricatis. Stamina 5, filamentis liberis; antheræ in alabastro recurvæ v. pendulæ, per anthesin erectæ, loculis ad apicem connectivi globosi distinctis. Ovarii rudimentum 0. Fl. ♀: Calyx maris. Ovarium 3–5-loculare; styli subulati, 2-partiti; ovula in loculis gemina. Capsula depressa, in coccos 2-valves dissiliens. Semina . . .—Frutex ramosus. Folia alterna, longiuscule petiolata, integra, pennivenia, subtus pubescentia. Inflorescentiæ axillares, fl. ♂ in umbellam pedunculatam dispositi, ♀ solitarii longius pedunculati. (*Char. ex Juss. et Muell. Arg.*)

Species 1, Madagascariensis, a nobis non visa. *Muell. Arg. in DC. Prod.* xv. ii. 445. Genus, evidenter *Phyllantho* valde affine, differt florum ♂ umbella seu fasciculo pedunculato, et antheris fere *Antidesmatis*, ab hoc genere quocum jungit Baill. Hist. Pl. v. 247, longe distat inflorescentia, disci et ovarii rudimenti e fl. ♂ absentia, ovario, stylis et fructu.

36. **Securinega**, *Juss. Gen.* 388.—Flores monoici v. dioici, apetali. Fl. ♂: Sepala 5,

imbricata. Disci lobi v. glandulæ 5, staminibus alterni. Stamina 5 v. rarius pauciora, filamentis liberis sepalis oppositis; antheræ erectæ, loculis distinctis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum plus minus evolutum, parvum v. longiusculo 2-3-fidum. Fl. ♀: Calyx maris. Discus subinteger. Ovarium 3-loculare; styli distincti, recurvi, 2-fidi; ovula in loculis gemina. Capsula sicca v. carnosula, in coccos 2-valves dissiliens. Seminum testa membranacea v. tenuiter coriacea, non lacunosa; albumen carnosum; embryo rectus, cotyledonibus planis latis.—Frutices ramosi. Folia alterna, integerrima, sæpe parva. Flores ad axillas glomerati, ♂ parvi, numerosi, subsessiles, ♀ pauciores v. solitarii, evidentius pedicellati.

Species ad 8, per varias regiones tropicas v. temperatas dispersæ. *A. Juss. Euph. Tent.* 14, *t.* 2. *Muell. Arg. in DC. Prod.* xv. ii. 447 (excl. *Fluggea*), *et in Mart. Fl. Bras.* xi. ii. 76, *t.* 11.

Genus in omnibus *Phyllantho* (sect. *Paraphyllantho* v. fere *Cicca*) convenit, excepto ovarii rudimento in fl. ♂ evoluto. Species typica Madagascariensis bene ab A. Jussieuo a *Fluggea* distinguitur. GEBLERA, *Fisch. et Mey. Ind. Sem. Hort. Petrop.* 1835, 28, ex Asia temperata, et COLMEIROA, *Reut. in Mem. Soc. Phyt. Genev.* x. 240, *t.* 6, e Hispania, rite in Prodromo in *Securinega* includuntur. MEINECKIA, *Baill. Etud. Euph.* 586, species arabica a nobis non visa, ab auctore a *Securinega* distinguitur petalis in fl. ♀ evolutis etsi minutis, quæ tamen a Muell. Arg. negantur. *Phyllanthus congestus*, Spruce, Muell. Arg. in DC. Prod. xv. ii. 379, e Brasilia, rite a Muell. Arg. in Mart. Fl. Bras. l. c. ad *Securinegam* transfertur. *S. acidothamnus* e Cuba, *S. elliptica* ex America australi, et *S. Schuechiana*, Muell. Arg., e Brasilia, sunt etiam vere congeneres. PLEIOSTEMON, *Sond. in Linnæa*, xxiii. 135, ex Africa australi, in Prodromo pro sectione *Phyllanthi* receptum, nobis tam habitu quam characteribus *Securinegis* parvifoliis congener videtur. Ovarii rudimentum semper invenimus etsi sæpius minimum, interdum vero filamentis vix brevius. *Fluggea trichogynis*, Baill., e Madagascaria, nobis ignota est, sed verisimiliter recto jure in *Securinega* includitur. BESSERA, *Spreng. Pugill.* ii. 90, genus est valde dubium, character instructus est ad *Koeleram*, Willd., quæ dubie ad *Flacourtiam* a pluribus refertur.

37. **Neoroepera**, *Muell. Arg. in DC. Prod.* xv. ii. 488.—Flores monoici, apetali. Fl. ♂: Sepala 5–6, subpetaloidea, imbricata. Stamina 5–6, circa discum centralem latum planum affixa, filamentis liberis; antheræ erectæ, loculis parallelis distinctis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calycis lobi v. segmenta quam in mare angustiora. Ovarium 3-loculare; styli distincti, patentes, indivisi, elongati et clavati v. breviores apice dilatati; ovula in loculis gemina. Capsula coriacea, in coccos 2-valves dissiliens. Semina leviter compressa, estrophiolata, testa lævi, nitida; albumen copiosum; embryo fere rectus, cotyledonibus latis planis.—Frutices. Folia alterna, breviter petiolata, parvula, integerrima, coriacea. Flores ad axillas fasciculati, ♂ numerosi, quam in *Fluggea* majores, ♀ in fasciculo solitarii, longius pedicellati.

Species 2, Australianæ. *Benth. Fl. Austral.* vi. 116. Genus a Baillono ad sectionem *Securinegæ* reductum, nobis abunde distinctum videtur florum ♂ structura, stylis indivisis et habitu.

38. **Fluggea**, *Willd. Spec. Pl.* iv. 757.—Flores dioici, apetali. Fl. ♂: Sepala 5, subpetaloidea, imbricata. Stamina 5 v. rarius pauciora, glandulis disci alterna, filamentis liberis; antheræ erectæ, loculis distinctis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 2-3-fidum. Fl. ♀: Calyx maris. Discus planus, annularis, dentatus. Ovarium 3-loculare; styli distincti, recurvi, 2-fidi; ovula in loculis gemina. Fructus subsuccosus, pericarpio tenui indehiscente v. irregulariter rupto nec in coccos secedente. Semina subtriquetra, dorso rotundata, testa crustacea ventre duplicata inter laminas cava; albumen haud copiosum, circa cavum incurvum; embryo incurvus, cotyledonibus latiusculis planis.—Frutices. Folia alterna, disticha, petiolata, integerrima. Flores minimi, axillares, pedicellati, ♂ in axillis sæpius numerosi, ♀ pauci v. solitarii. Stamina exserta.

Species ad 6, Asiæ, Africæ et Australiæ inter tropicos incolæ, a Muell. Arg. in DC. Prod. xv. ii. 449. *Securinegæ* adscriptæ. *Wight, Ic. t.* 1875. *Brandis, For. Fl. t.* 54 (*Securinega*).

Genus fructu et seminibus a *Securinega* distinctum, a *Breynia* differt calyce et (uti *Securinega* a *Phyllantho*) ovarii rudimento in fl. ♂ evoluto.

39. **Breynia**, *Forst. Char. Gen.* 145, *t.* 73. (Melanthesa, *Blume, Bijdr.* 590.)—Flores

monoici, apetali. Discus 0. Fl. ♂: Calyx breviter turbinatus, supra planus, lobis v. dentibus 6 inflexis fere clausus. Stamina 3, filamentis in columnam centralem connatis; antheræ ad apicem columnæ sessiles, adnatæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx turbinatus v. campanulatus, fructifer interdum auctus explanatus, lobis brevibus nunc ad dentes minutos reductis. Ovarium sessile v. breviter stipitatum, 3-loculare, superne carnosum; styli erecti v. patentes, indivisi v. apice 2-fidi; ovula in loculis gemina. Bacca globosa v. depressa, indehiscens. Semina triquetra, dorso rotundata, testa crustacea ventre duplicata inter laminas cava, extus in vivo sæpius pulposa; albumen haud copiosum, circa cavum incurvum; embryo curvus, cotyledonibus latiusculis planis.—Frutices v. arbusculæ. Folia alterna, petiolata, sæpius disticha et siccitate nigricantia. Flores axillares, parvi, pedicellati, in axillis solitarii v. ♂ fasciculati, fasciculo rarius in racemum brevissimum excurrente. Baccæ sæpius rubræ.

Species ad 12, Asiæ tropicæ, Australiæ et insularum maris Pacifici australis incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 438. *Benth. Fl. Austral.* vi. 113. *Wight, Ic. t.* 1897, 1898 (*Melanthesa*). *Bot. Mag. t.* 1862 (*Phyllanthus*). *Lodd. Bot. Cab. t.* 731 (*Phyllanthus*).

In speciebus typicis styli breves erecti v. patentes, sæpius indivisi. Melanthesiopsis, *Muell. Arg. in Linnæa*, xxxii. 74, *et in DC. Prod.* xv. ii. 436, potius sectio quam genus distinctum, species 2 Asiaticas includit stylis longioribus apice patentibus bifidisque. Genera a Muellero distinguuntur seminibus arillo inclusis in *Melanthesiopside* exarillatis in *Breyniæ*. Seminum structura in utroque nobis eadem videtur. In vivo testæ stratus exterior plus minus pulposa dicitur et sæpe pro arillo pulposo describitur.

40. **Petalostigma,** *F. Muell. in Hook. Kew Journ.* ix. 16. (Hylococcus, *R. Br. in Bauer Ic. ined.*)—Flores monoici, apetali. Discus 0. Fl. ♂: Sepala 4–6, imbricata. Stamina ∞, filamentis basi in columnam centralem sæpe brevissimam connatis, superne liberis; antheræ erectæ, adnatæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Sepala quam in ♂ angustiora, caducissima. Ovarium 4-loculare v. rarius 3-loculare; styli patentes, in laminas stigmatosas planas fere petaloideas expansi; ovula in loculis gemina. Fructus ovoideo-globosus, primum drupam simulans, exocarpio carnoso, endocarpio duro, demum in coccos 2-valves dissiliens. Semina oblonga, strophiola parva, testa crustacea nitida non lacunosa; albumen carnosum; embryo rectus, cotyledonibus latis planis.—Arbor. Folia alterna, integerrima. Flores axillares, ♂ glomerati, brevissime pedicellati, ♀ solitarii v. pauci, pedicellis longioribus.

Species 1, Australiana. *Benth. Fl. Austral.* vi. 92. *Baill. Adans.* vii. *t.* 2.

41. **Putranjiva,** *Wall. Tent. Fl. Nap.* 61. (Nageia, *Roxb. Fl. Ind.* iii. 766, *non Gærtn.*—Flores dioici v. monoici, apetali. Discus 0. Fl. ♂: Calyx tenuis, alte 3–6- (sæpius 5-) lobus v. partitus, lobis segmentisve inæqualibus imbricatis. Stamina 3 v. 2, rarius 4, filamentis in centro floris brevibus distinctis v. subconnatis; antheræ erectæ, loculis distinctis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx maris. Ovarium ovoideum, 3- v. 2-loculare; styli breves, patentes, in ramos latos carnosos papillosos expansi; ovula in loculis gemina. Drupa ovoidea v. globosa, endocarpio duro fere osseo, abortu 1-locularis 1-sperma. Semen ovoideum, testa crustacea; albumen carnosum; embryo rectus, cotyledonibus latis planis.—Arbores ligno duro. Folia alterna, integerrima, rigide membranacea v. coriacea, tenuiter pennivenia et reticulato-venosa. Flores axillares, ♂ numerosi, brevissime pedicellati, dense glomerati, ♀ longius pedicellati, solitarii v. pauci.

Species 2, Indiæ orientalis incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 443. *Endl. Iconogr. t.* 19. *Wight, Ic. t.* 1876. *Brand. For. Fl. t.* 53. *Royle, Ill. Himal. Pl. t.* 83*a* (100).

In specie typica *P. Roxburghii* (inclusis *P. sphærocarpa* et *P. amblyocarpa*, Muell. Arg.) andrœcium et pistillum sæpius 3-mera et flores (an semper?) dioici; in altera, quæ Palenga, *Thw. in Hook. Kew Journ.* viii. 270, *t.* 7, andrœcium et pistillum sæpius 2-mera, styli minus dilatati, et in uno specimine flores certe monoicos vidimus.

42. **Drypetes,** *Vahl, Ecl.* iii. 49.—Flores dioici, apetali. Fl. ♂: Sepala 4–6, imbricata. Stamina circa discum centralem planum v. concavum numero sepalorum æqualia v. subdupla, exteriora sepalis opposita ad margines v. in sinubus disci, interiora intra marginem affixa, filamentis liberis; antherarum loculi paralleli, longitudinaliter dehiscentes. Ovarii rudimentum in medio disco varium nunc minutum v. 0. Fl. ♀: Calyx maris. Discus vix prominens. Ovarium 1- rarius 2-loculare; stigmata 1–2, peltata v. reniformia, ad apicem ovarii sessilia v. breviter stipitata; ovula in loculis gemina. Fructus ovoideus, 1-locularis, abortu 1-spermus v. rarius didymus 2-locularis 2-spermus, subdrupaceus, indehiscens, carne subcoriacea, endocarpio duro nunc osseo. Semina estrophiolata; albumen carnosum; embryo rectus, cotyledonibus planis latis.—Arbores fruticesve glabri. Folia alterna, coriacea, integerrima v. obscure sinuato-dentata, penninervia. Flores ad axillas glomerati, sessiles v. pedicellati, ♂ sæpius numerosi, ♀ pauciores.

Species 9, Brasiliæ, Indiæ occidentalis et Floridæ incolæ. *Muell. Arg. in. DC. Prod.* xv. ii. 453, *et in Mart. Fl. Bras.* xi. ii. 79, *t.* 12. *Poit. in Mém. Mus. Par.* i. *t.* 6 *ad* 8.

Freireodendron, *Muell. Arg. in DC. Prod.* xv. ii. 244. *et in Mart. Fl. Bras.* xi. ii. 17, *t.* 3, est *Drypetes sessiliflora*, Allem., in Comment. a Soc. Vell. edit., a genere separata ob ovarii rudimentum in fl. ♂ 0. Flores ♂ tamen ex icone sola noti, discus in hac icone glaber apparet, sed ex descriptione auctoris pilosiusculus est, et staminum insertio nobis omnino eadem apparet ac in speciebus nonnullis Cubensibus, ubi discus in centro floris pilosiusculus parum convexus, vix in ovarii rudimentum protrusus.

43. **Forchhammeria,** *Liebm. in Vidensk. Meddel. Naturh. Foren. Kjobenh.* 1853, 93.—Flores (dioici?) apetali. Fl. ♂: Calyx minutus, 4–8-dentatus, dentibus inæqualibus sensim obsoletis. Stamina ∞ (16–24), toro brevissimo carnoso affixa, filamentis liberis; antherarum loculi paralleli, longitudinaliter dehiscentes. Ovarii rudimentum in medio toro sessile, brevissime 2-lobum. Fl. ♀. Calyx maris. Discus brevissimus, in dentes minimos 8–12 deciduos productus. Ovarium 2-loculare; stigmata in discum sessilem orbiculato-peltatum obscure 2-lobum connata; ovula in loculis gemina. Fructus ovoideus v. subglobosus, 2-locularis v. abortu 1-locularis, subdrupaceus, indehiscens, carne exteriore tenui, endocarpio crasso spongioso-mucoso (v. demum indurato?). Semina in loculis abortu solitaria, estrophiolata, testa subcoriacea; albumen 0; cotyledones convolutæ, carnosæ.—Arbor glabra. Folia alterna, ad apices ramulorum sæpe conferta, petiolata, oblonga, integerrima, coriacea, penninervia. Racemi ad nodos defoliatos laterales, breves.

Species 1, Mexicana. Specimen nostrum a Liebmannio acceptum haud perfectum et characterem pro parte e descriptione auctoris excerpimus. Stipulas negat Liebmann sed in specimine certe adsunt parvæ, rigidulæ, subulatæ. Generis ab auctore dubie ad *Capparideas* relati jam supra i. 108 affinitatem cum *Euphorbiaceis* indicavimus, inter quas *Drypetidi* proximum videtur. Muell. Arg. in DC. Prod. xv. ii. 1258, ex ordine rejicit, ob semina exalbuminosa cotyledonibus convolutis, semina tamen similia observantur in *Discocarpo* affinibusque.

44. **Hemicyclia,** *W. et Arn. in Edinb. New Phil. Journ.* xiv. 297. (Periplexis, *Wall. Cat. Herb. Ind. n.* 8022. Astylis, *Wight, Ic. t.* 1992. Anaua, *Miq. Fl. Ind. Bat. Suppl.* 410.)—Flores dioici, apetali. Fl. ♂: Sepala 4–5, valde imbricata, interiora sæpius majora subpetaloidea. Stamina ∞ (4–23), circa discum centralem latum concavum integrum v. margine undulatum affixa, filamentis liberis; antheræ erectæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx maris. Discus hypogynus planus, annularis. Ovarium oblique ovoideum, 1-loculare; stigma sessile, late reniforme v. semi-orbiculare, planum v. recurvum, integrum v. emarginatum; ovula in loculo gemina. Fructus globosus v. ovoideus, drupaceus, indehiscens, exocarpio mucoso, endocarpio crustaceo v. indurato nunc osseo. Semen abortu sæpius unicum, oblongum, hinc sulcatum, testa haud crassa; albumen carnosum; embryo rectus, cotyledonibus latis planis.—Arbores fruticesve. Folia alterna, petiolata, integerrima, demum coriacea. Flores ad axillas v. ad nodos ramulorum defoliatorum, parvi, pedicellati ♂ pauci fasciculati, ♀ sæpius solitarii.

Species 9, Indiæ orientalis, Archipelagi Malayani et Australiæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 487. *Benth. Fl. Austral.* vi. 117. *Kurz, For. Fl. Brit. Burm.* ii. 365. *Wight. Ic. t.* 1872. *Bedd. Fl. Sylv. t.* 279.

Genus a *Cyclostemone* differt ovario ad carpellum unicum reducto. Fructus endocarpium variat tenue v. induratum, character tamen valde incertus nec ad sectiones distinguendas sufficit.

45. **Cyclostemon**, *Blume, Bijdr.* 597. (Sphragidia, *Thw. in Hook. Kew Journ.* vii. 269, *t.* 10. Pycnosandra, *Blume, Mus. Bot.* ii. 191. Laneasagum, *Bedd. in Madras Journ. Sc. ser.* 2, vi. 71.)—Flores dioici, apetali. Fl. ♂: Sepala 4, rarius 5, lata, imbricata, alabastris sæpius globosis. Stamina ∞, pauca v. numerosa, circa discum centralem planum v. concavum affixa, filamentis liberis calyce brevioribus; antheræ erectæ, interdum magnæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx maris. Discus hypogynus annularis v. obsoletus. Ovarium 2–4-loculare; styl breves nunc brevissimi, stigmatibus crassis valde dilatatis v. in unum pileiformem connatis (rarius elongatis filiformibus ?); ovula in loculis gemina. Fructus (in *C. macrophyllo* et *C. natalensi*) subglobosus, indehiscens, pericarpio crasso indurato 2-loculari. Semina in loculis abortu solitaria; albumen carnosum; embryo rectus, cotyledonibus planis latis.—Arbores. Folia alterna, coriacea v. submembranacea, integerrima v. crenato-dentata. Flores tam ♀ quam ♂ ad axillas v. ad nodos ramorum vetustiorum fasciculati, pedicellati.

Species ad 18, Indiæ orientalis, Archipelagi Malayani v. Africæ tropicæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 481. *Kurz, For. Fl. Brit. Burm.* ii. 363. *Bedd. Fl. Sylv. t.* 278, *et Ic. Pl. Ind. Or. t.* 183. *Harv. Thes Cap. t.* 200.

Genus a Muell. Arg. in sectiones 3 dividitur. In speciebus typicis stamina sæpius ultra 10, ovarium 2-loculare, stigmata dilatata subsessilia. *Stenogynium* paullulum differt staminibus paucioribus, stylis sub stigmatibus parum productis. Dodecastemon, *Hassk. in Verh. Akad. Amst.* iv. 141, *ex ejusd. Hort. Bogor.* 63, pro sectione *Cyclostemonis* in Prodromo admissum, species nobis ignota, ovario 3–4 loculari, stylis filiformibus, vix congener videtur.

46. **Dissiliaria**, *F. Muell.*; *Baill. Adans.* vii. 356.—Flores monoici (v. dioici ?), apetali. Fl. ♂: Sepala 4–6, imbricata, interioribus paullo majoribus subpetaloideisque. Discus (an semper ?) 0. Stamina 4–6 v. ∞, filamentis brevissimis; antheræ dorsifixæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Sepala 3–4, interioribus interdum minoribus. Discus annularis v. cyathiformis. Ovarium breve, 3-loculare; styli lineares, patentes, indivisi, liberi v. basi breviter connati; ovula in loculis gemina. Capsula tridyma, in coccos 2-valves dissiliens, pericarpio duro. Semina estrophiolata; albumen carnosum; embryo rectus, cotyledonibus latis planis.—Arbores fruticesve. Folia opposita, integerrima v. crenulata, penninvenia, tenuiter reticulata. Flores parvi, axillares v. gemma terminali nondum evoluta subterminales, ♂ minimi fasciculati, brevissime pedicellati, ♀ pauci v. solitarii. Capsulæ sæpius solitariæ.

Species 3, Australiæ tropicæ v. orientalis subtropicæ incolæ. *Benth. Fl. Austral.* vi. 90.

Choriceras, *Baill. Adans.* xi. 119, est verisimiliter *D. tricornis*, Benth., cujus carpellorum apices jam in flore distincti sunt, et stylorum cicatrices v. bases persistentes in fructu dissiti, tubercula v. cornua brevia ad apices coccorum relinquunt. Flores tamen tam ♂ quam ♀ specierum *Dissiliariæ* adhuc imperfecte noti sunt. Styli basi arcte approximati v. valde dissiti in eodem genere observantur in *Stylocerate* et in *Buxo*.

47. **Longetia**, *Baill. Adans.* vi. 352, *t.* 9.—Flores monoici, apetali. Discus 0. Fl. ♂: Sepala 6, rarius 5, imbricata, concava, exteriora sæpe paullo minora. Stamina ∞ (10–18), receptaculo parum elevato pilosulo affixa, filamentis liberis; antheræ dorsifixæ, loculis extrorsum parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum parvum. Fl. ♀: Ovarium ovoideum v. oblongum, 3-loculare, per anthesin carnosulum, apice in stylos brevissimos crassos obcordatos patentes divisum; ovula in loculis gemina. Capsula ovoidea, subtriquetra, loculicide dehiscens v. in coccos 2-valves dissiliens. Semina strophiolata; albumen carnosum; embryo rectus, cotyledonibus latis planis.—Frutex glaber. Folia opposita, coriacea. Flores parvi, pedicellati, ♂ umbellato-fasciculati, umbel-

lulis in axillis superioribus sessilibus v. pedunculatis, ♀ in media umbella solitarii (v. in axilla propria solitarie pedunculati ?).

Species nobis nota 1, Novo-Caledonica, *Muell. Arg. in DC. Prod.* xv. ii. 244. Huic addidit Baillon, Hist. Pl. v. 250, alteram ex eadem insula oligandram a nobis non visam.

48. **Bureavia,** *Baill. Adans.* xi. 83.—Flores dioici, apetali. Fl. ♂: Sepala 4, imbricata. Stamina ∞ (8-12), receptaculo irregulariter 4-6-gono affixa, filamentis liberis erectis; antheræ extrorsum 2-rimosæ. Fl. ♀: Sepala 3-4, brevia, basi crassiuscula, imbricata. Discus annularis, submembranaceus, incisus v. fimbriatus. Ovarium 3-4-loculare; styli brevissime connati, patentes, crasso-carnosi, medio sulcati, indivisi; ovula in loculis gemina, sub obturatore magno carnoso fere occulta. Fructus subdrupaceus, exocarpio coriaceo-subcarnoso ab endocarpio in valvas 3-4 solubili, endocarpio duro demum in coccos 2-valves dissiliente. Semina strophiolata; albumen carnosum; cotyledones planæ, latæ.—Arbores parvæ, glabræ. Folia opposita, breviter nunc brevissime petiolata, integerrima, coriacea, penninervia. Flores axillares v. ad nodos defoliatos, ♂ parvi, in racemulis brevibus v. cymis fasciculatis crebris numerosi, ♀ subsessiles v. breviter pedicellati, solitarii v. glomerati. (*Char. fl. ex Baill.*)

Species editæ 2, Novo-Caledonicæ, quarum specimina fructifera tantum nobis adsunt et genus ostendunt *Longetiæ* valde affine et verisimiliter ei adjungendum. Speciei tertiæ specimina nuperrime accepimus a J. Horne in insulis Fiji lecta, omnia fœminea floribus fructibusque *Bureaviæ* v. *Longetiæ* convenientia, nisi stylis in discum planum stigmatosum fere omnino connatis

49. **Choriophyllum,** *Benth. in Hook. Ic. Pl. t.* 1280.—Flores dioici, apetali. Discus 0. Fl. ♂: Sepala 4, rarius 5-6, membranacea, lata, valde imbricata. Stamina 4, circa receptaculum v. ovarii rudimentum conicum affixa, sepalis opposita, filamentis liberis exsertis; antheræ dorsifixæ, loculis extrorsum contiguis parallelis longitudinaliter dehiscentibus. Fl. ♀: Sepala 4, crassa, carnosa, lata, circa ovarium arcte imbricata. Ovarium 3-loculare; styli distincti, erecti, apice brevissime patentes, crassi, obtusi, indivisi; ovula in loculis gemina. Capsula in coccos 2-valves a columella persistente dissiliens, endocarpio cartilagineo. Semina in loculis gemina v. abortu solitaria, oblonga, testa crustacea nitida; albumen carnosum; cotyledones planæ, latæ.—Arbores glabræ. Folia opposita, breviter petiolata, integerrima, coriacea, tenuiter penninervia. Racemuli ♂ ad axillas v. nodos vetustos subterni v. prope basin opposite ramosi, folio breviores, floribus parvis secus rhachin in cymulas paucas laxas dispositis. Flores ♀ in spicis sessilibus pauci sessiles.

Species 1, quoad foliorum formam et magnitudinem variabilis, Archipelagi Malayani incola. *Wallich, Cat. Herb. Ind. n.* 7975; *Griffith*; *Maingay*; *Beccari, n.* 3270, 3305, 3329, 3344.

50. **Toxicodendron,** *Thunb. in Akad. Vetensk. Handl. Stockh.* 1796, 188, *t.* 7. (Hyænachne, *Lamb. Descr. Cinch.* 1797, 52, *t.* 10.)—Flores dioici, apetali. Discus 0. Fl. ♂: Sepala 5-12, brevia, irregulariter imbricata, interioribus sæpe minoribus. Stamina ∞, filamentis brevissimis in receptaculo lato dense conferta; antheræ majusculæ, erectæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum in centro floris minimum v. antheris vix brevius, rarius obsoletum. Fl. ♀: Sepala interiora exterioribus multo majora. Ovarium villosum, 3-4-loculare; styli (a nobis non visi) 3-4, basi connati, apice patentes, crassi, indivisi, dense papillosi (*ex ic. Lamb.*); ovula in loculis gemina. Capsula subglobosa, crassa, dura, in coccos 2-valves dissiliens. Seminum testa crustacea, nitida; albumen carnosum; embryo rectus, cotyledonibus latis planis.—Arbusculæ rigide ramosissimæ. Folia opposita v. sæpius verticillata, integerrima, rigide coriacea. Flores axillares, ♂ denso cymulosi cymulis breviter pedunculatis, v. laxius racemosi, ♀ solitarii, breviter pedicellati.

Species 2, Africæ australis incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 480. *Baill. Étud. Euph. t.* 23. *Benth. in Journ. Linn. Soc.* xvii. 214.

51. **Mischodon,** *Thw. in Hook. Kew Journ.* vi. 299, *t.* 10.—Flores dioici, apetali. Fl.

♂: Sepala 5–8, imbricata, sæpe inæqualia. Discus 0. Stamina 5–10, si segmentis isomera iis opposita, filamentis liberis filiformibus aspero-hirtis; antheræ ovatæ, dorsifixæ, loculis parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum parvum, sæpius 3-lobum. Fl. ♀ (a nobis non visi): Discus annularis. Ovarium 3–4-loculare; styli breves, patentes, plani, crassiusculi, obovati, basi brevissime connati; ovula in loculis gemina (*Beddome, ic. et descr.*). Capsula in coccos 2-valves dissiliens, endocarpio duriuscule crustaceo. Semina in coccis abortu sæpius solitaria, ovata, testa crustacea nitida; albumen carnosum; cotyledones latæ, planæ.—Arbor inflorescentia excepta glabra. Folia 3–4-natim verticillata, breviter petiolata, longa, integerrima, coriacea, pennivenia, reticulata. Paniculæ axillares, folio multo breviores, ♂ densæ, floribundæ, floribus in ramulis confertis; ♀ laxiores, paucifloræ.

Species 1, Zeylanica. *Muell. Arg. in DC. Prod.* xv. ii. 1124. *Bedd. Fl. Sylv. t.* 290.

52. **Oldfieldia,** *Hook. Kew Journ.* ii. 184, *t.* 6.—Flores dioici? apetali, ♀ ignoti. Fl. ♂: Calyx brevis, breviter et obtuse 5–7-fidus. Stamina ∞ (4–10), circa discum crassum villosulum breviter lobatum affixa, exteriora lobis perianthii opposita, filamentis liberis; antheræ erectæ, loculis distinctis ovoideis contiguis longitudinaliter sulcatis 2-valvatim dehiscentibus. Ovarii rudimentum 0. Fl. ♀ . . . Capsula globosa, 3-sulca, pericarpio crasso duro in valvas integras medio septiferas loculicide dehiscente. Semina in loculis gemina v. abortu solitaria, oblique obovata, compressa, testa crustacea; albumen carnosum; cotyledones planæ, latissimæ.—Arbor præter inflorescentiam pubescentem glaber. Folia opposita, longe petiolata, digitatim 5–7-foliolata, foliolis petiolulatis integerrimis coriaceis penniveniis. Flores ♂ laxe cymulosi, cymulis ad axillas pedunculatis petiolo brevioribus.

Species 1, Africæ tropicæ occidentalis incola. Genus a Muell. Arg. ex ordine rejicitur ob capsulæ dehiscentiam stricte loculicidam, quod tamen plus minus distincte in variis generibus (e.g. *Agyneia, Baccaurea, Sapio* aliisque) observatur. Flores ♂ fere *Toxicodendri*, ubi etiam folia opposita et capsula, dehiscentia excepta, simillima.

53. **Bischofia,** *Blume, Bijdr.* 1168. (Microelus, *Wight et Arn. in Edinb. New Phil. Journ.* xiv. 298. Stylodiscus, *Benn. Pl. Jav. Rar.* 133, *t.* 29.)—Flores dioici, apetali. Discus 0. Fl.: Sepala 5, imbricata, concava, supra antheras fere cucullata. Stamina 5, filamentis brevibus; antheræ magnæ, loculis parallelis distinctis medium versus affixis longitudinaliter dehiscentibus. Ovarii rudimentum breve, latum. Fl. ♀: Sepala leviter concava, caducissima. Staminodia parva fere glanduliformia interdum adsunt ad basin segmentorum. Ovarium 3- rarius 4-loculare; styli lineares, crassi, integri, a basi papillosi; ovula in loculis gemina. Fructus subbaccatus, globosus, indehiscens, sæpius 3-locularis, exocarpio carnoso, endocarpio pergameneo. Seminum testa crustacea (in vivo extus pulposa?); albumen carnosum; embryo rectus, cotyledonibus planis latis.—Arbor procera. Folia alterna, 3-foliolata, foliolis petiolulatis majusculis sæpius crenatis. Racemi laterales, præsertim in ♂ paniculato-ramosi. Flores ♂ secus rhachin sparsi v. subfasciculati, brevissime pedicellati, ♀ longius pedicellati.

Species 1, per Asiam tropicam Archipelagum Malayanum et insulas maris Pacifici australis late dispersa. *Muell. Arg. in DC. Prod.* xv. ii. 478. *Dcne. in Jacquem. Voy. Bot. t.* 154. *Bedd. Fl. Sylv. t.* 259. *Hook. Ic. Pl. t.* 844. *Wight, Ic. t.* 1880 (*Microelus*).

Fructus in speciminibus siccis variat magnitudine, pedicellorum longitudine, et pericarpio tenuiore v. crassiore, sed formæ suppetentes nequaquam in species diversas distribuendæ videntur.

54. **Piranhea,** *Baill. Adans.* vi. 235, *t.* 6.—Flores dioici, apetali. Fl. ♂: Calycis parvi lobi v. segmenta 4–6, subimbricati, mox aperti. Stamina ∞ (8–15), disco centrali glanduloso-lobato irregulariter affixa, filamentis liberis tenuibus; antheræ parvæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Sepala quam in ♂ distinctiora. Staminodia ∞, breviter subulata, sub ovario basi uniseriatim in annulum connata. Ovarium 3-loculare; styli lineares, crassi, recurvi, acutiusculi; ovula in loculis

gemina, strophiola majuscula obtecta. Capsula subglobosa, acuminata, dura, in coccos apice 2-valves dissiliens. Semina in loculis abortu solitaria, vix strophiolata, testa crassiuscule membranacea fere coriacea lævi; albumen carnosum; cotyledones planæ, latæ.—Arbor. Folia alterna, digitatim 3-foliolata, foliolis amplis sub anthesi membranaceis demum coriaceis integerrimis in petiolulum contractis, petiolo communi longo. Racemi v. spicæ interruptæ, in ramis annotinis laterales, simplices, ♂ graciles, ♀ abbreviati. Flores secus rhachin subsessiles, ♂ fasciculati, ♀ sparsi. Bracteæ minutæ v. 0.

Species 1, Brasiliæ borealis incola, *Spruce n.* 1598 *et* 1605, cum fl. ♂ et ♀, et in Guiana anglica, *Parker*, specimen fructiferum.

55. **Uapaca,** *Baill. Etud. Euph.* 595.—Flores dioici, apetali. Involucrum perianthiforme, subglobosum, e bracteis 5–6 imbricatis primum flores obtegentibus demum sæpius reflexis. Fl. ♂: Amentum globosum v. ovoideum in involucro breviter stipitatum, floribus numerosis sessilibus. Calyx minimus, campanulatus v. turbinatus, dentatus v. 4–5-lobus. Discus 0. Stamina 4–5, filamentis distinctis breviter exsertis; antheræ erectæ, loculis contiguis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum apice sæpius dilatatum. Flores ♀ intra involucrum solitarii, sessiles. Perianthium præter involucrum 0. Discus annularis v. breviter cyathiformis, integer v. sinuato-lobatus. Ovarium 3- rarius 2- v. 4-loculare; styli crassi, recurvi, superne dilatati varie ramosi; ovula in loculis gemina. Fructus indehiscens, carnosus, endocarpio parum indurato 3-pyreno. Semina in pyrenis sæpius abortu solitaria, majuscula, a dorso compressa (testa in vivo extus pulposa?); albumen carnosum; embryo rectus, cotyledonibus planis latis.—Arbores ramis validis. Folia alterna, ad apices ramorum plus minus conferta, sæpius obovato-oblonga, integerrima, penninervia. Involucra in utroque sexu in ramis annotinis v. vetustioribus pedicellata, sparsa.

Species 7, Africæ tropicæ et Madagascariæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 489. *Baill. Adans.* xi. 176. *Benth. in Hook. Ic. Pl. t.* 1287. Involucrum floris ♀ ab auctoribus calyx dicitur, nobis omnino involucro ♂ homologum videtur, perianthio proprio in fl. ♂ minimo, in fl. ♀ omnino deficiente.

56. **Aporosa,** *Blume, Bijdr.* 514. (Lepidostachys, *Wall. Cat. Herb. Ind. n.* 6816; *Lindl. Introd. Nat. Syst. ed.* 2, 441. Scepa, *Lindl.* l. c. Tetractinostigma, *Hassk. Hort. Bogor. Descr.* 55.)—Flores dioici, apetali. Discus 0. Fl. ♂: Sepala 3–6, sæpe inæqualia, membranacea, imbricata. Stamina 2–5, filamentis in centro floris liberis elongatis; antheræ parvæ, loculis subglobosis distinctis contiguis v. connectivo crassiusculo separatis, erectiusculis v. primum deflexis, longitudinaliter dehiscentibus. Ovarii rudimentum minutissimum v. 0. Fl. ♀: Ovarium 2–3-loculare; styli breves, patentes, 2-fidi, lobis crassiusculis sæpe laciniatis; ovula in loculis gemina. Drupa fere exsucca, endocarpio crustaceo v. duriusculo, abortu sæpius 1–2-sperma, demum irregulariter rupta v. sub-2-valvis. Semina obovoidea, testa extus (an semper?) pulposa; albumen carnosum; cotyledones planæ, latæ.—Arbores et arbusculæ. Folia alterna, petiolata, integerrima, coriacea, penninervia. Flores ad axillas spicati v. racemosi, spicis ♂ amentiformibus sæpe fasciculatis, ♀ brevibus laxioribus. Bracteæ latæ, concavæ, in spicis ♂ sæpe subimbricatæ, in ♀ parvæ. Drupæ quam in *Antidesmate* sæpius majores.

Species ad 20, Asiæ tropicæ et Archipelagi Malayani incolæ. *Muell. Arg in DC. Prod.* xv. ii. 469. *Kurz, For. Fl. Brit. Burm.* ii. 361. *Baill. Adans.* xi. 177. *Wight, Ic. t.* 361 (*Scepa*). *Bedd. Fl. Sylv. t.* 286.

Leiocarpus, *Blume, Bijdr.* 581, ad *Aporosam* refertur a Muell. Arg., qui specimina authentica vidit. Character Blumeanus vix convenit.

Antidesma lunatum, Miq.; Muell. Arg. l. c. 251, ex speciminibus optimis ♂ et ♀ a Maingayo lectis, cum specie affine Borneensi, *Beccari n.* 1213, sunt *Aporosæ* species, foliis magnis rugosis, stipulis amplis late falcatis insignes. Genus cæterum *Baccaureæ* valde affine, differt ovarii rudimento subnullo et quodammodo habitu.

57. **Daphniphyllum,** *Blume, Bijdr.* 1152. (Goughia, *Wight, Ic.* v. 22, *t.* 1878, 1879.

Gyrandra, *Wall. Cat. Herb. Ind. n.* 8020.) — Flores dioici, apetali. Fl. ♂ : Calycis segmenta 3–8, parva, imbricata v. aperta. Stamina ∞ (5–18), filamentis brevibus liberis; antheræ magnæ, erectæ, loculis parallelis adnatis lateraliter 2-valvatim dehiscentibus. Ovarii rudimentum 0. Fl. ♀ : Calyx maris. Disci glandulæ v. squamæ 4–6 v. 0. Ovarium vix perfecte 2-loculare; styli distincti, crassiusculi, recurvo-patentes, indivisi; ovula in loculis gemina. Drupa oliviformis, indehiscens, sæpissime abortu 1-sperma. Seminis testa membranacea; albumen crasso-carnosum; embryo albumine quater ad sexies brevior, cotyledonibus ovatis oblongisve subplanis radicula parum latioribus.—Arbores glabræ. Folia alterna, petiolata, integerrima, coriacea, sæpe angusta, pennivenia. Racemi utrisque sexus axillares, breves, laxiusculi, bracteis minutis v. 0. Flores pedicellati, secus rhachin sparsi.

Species genuinæ 11, Asiæ tropicæ et Archipelagi Malayani incolæ. *Muell. Arg. in DC. Prod.* xvi. i. 1. *Baill. Etud. Euph. t.* 21. *Bedd. Fl. Sylv. t.* 288. His addidit Muell. Arg. speciem ex Africa tropica occidentali quodammodo dubiam, florum ♂ perianthio breviter 4–5-fido nec partito, floribus ♀ ignotis. Idem auctor genus ob embryonem brevem ad ordinem proprium *Daphniphyllacearum* producit, cui tamen assentiri nequimus. Habitus *Baccaureæ*, antheræ *Toxicodendri*, embryo etsi parvus ei *Phyllanthearum* plurium similior quam *Stenolobiearum*.

58. **Baccaurea,** *Lour. Fl. Cochinch.* 661. (Pierardia, *Roxb. Hort. Beng.* 28, *nomen tantum, descr. a Jack in Trans. Linn. Soc.* xiv. 119, *et Roxb. Fl. Ind.* ii. 254. Adenocrepis, *Blume, Bijdr.* 579. Microsepala *et* Calyptroon, *Miq. Fl. Ind. Bat. Suppl.* 444 *et* 471.) —Flores dioici v. rarius racemi diversi sexus in eadem arbore, apetali. Discus 0 v. rarius parvus. Fl. ♂ : Sepala 4–5, imbricata. Stamina numero sepalorum æqualia v. rarius subdupla, filamentis liberis tenuibus; antherarum loculi parvi, longitudinaliter dehiscentes, contigui v. connectivo crassiusculo separati. Ovarii rudimentum plus minus evolutum, sæpe apice in discum peltatum expansum. Fl. ♀ : Calyx maris. Ovarium 2–5- vulgo 3-loculare; styli (v. stigmata sessilia) breves, crassissimi v. plani, erecti v. patentes, apice sæpius brevissime lobati v. fimbriati; ovula in loculis gemina. Fructus ovoideus obovoideus v. globosus, pericarpio carnoso demum indurato sæpe lignoso indehiscente v. demum loculicide valvato. Semina abortu sæpius pauca v. solitaria, majuscula, testa crassiuscule membranacea v. crustacea, in vivo extus pulposa, in parte inferiore sæpe (an semper?) duplex lacunam includens; albumen carnosum, haud crassum; embryo sæpius leviter incurvum, cotyledonibus latiusculis.—Arbores. Folia alterna, ampla, petiolis sæpe longis basi apiceque subincrassatis, pennivenia, coriacea, integerrima v. leviter undulato-crenata. Flores racemosi, secus rhachin ad axillas bractearum solitarii v. ♂ cymulosi, racemis sæpius in ramis annotinis v. vetustioribus solitariis v. fasciculatis simplicibus v. ♂ subramosis. Pedicelli breves.

Species enumeratæ 33, Indiæ orientalis, Archipelagi Malayani et insularum maris Pacifici incolæ, nonnullæ tamen reducendæ et paucæ addendæ adhuc ineditæ. *Muell. Arg. in DC. Prod.* xv. ii. 457. *Wight, Ic. t.* 1912, 1913 (*Pierardia*). *Bedd. Fl. Sylv. t.* 280.

In *Baccaureis* typicis, sectionem *Pierardiam* constituentibus, fructus indehiscens. In Hedycarpo, *Jack in Trans. Linn. Soc.* xiv. 118, species plures Malayanas includente, pericarpium crassum, durum, demum loculicide dehiscit, dehiscentia tamen omnino eadem ac in pluribus generibus *Euphorbiacearum* et nescimus qua ratione genus ab Endlichero auctoribusque pluribus recentioribus ad *Sapindaceas* transfertur. Stamina 4 tantum sæpe etiam in *Baccaureis* typicis observantur, dehiscentia in speciebus nonnullis tardissima v. inconstans, et *Hedycarpus* pro sectione vix definita *Baccaureæ* habendus est.

Platystigma, *Wall. Cat. Herb. Ind. n.* 7523, est species Silhetensis cujus flores ♀ tantum noti. Habitus *Baccaureæ*. Ovarium 1-loculare, 2-ovulatum. Stigma fere *Hemicycliæ*. Genus est valde dubium, forte in *Baccaurea* includendum.

59. **Cometia,** *Thou. ex Baill. Etud. Euph.* 642; *Hist. Pl.* v. 244.—Flores dioici, apetali. Fl. ♂: Sepala 3–5, imbricata. Discus 0. Stamina 3–5 in centro floris sub ovarii rudimento apice dilatato (*Baill.*). Ovarii rudimentum 0 (*Muell. Arg.*). Fl. ♀ : Calyx ignotus. Discus annularis. Ovarium 1-loculare; stylus e basi dilatatus suborbicularis, excentricus,

carnosulus, supra papilloso-stigmatosus; ovula in loculis gemina. Fructus drupaceus, indehiscens, exocarpio crasso carnoso, endocarpio duro. Semen abortu unicum, estrophiolatum; albumen copiosum; cotyledones foliaceæ.—Arbusculæ glabræ. Folia alterna, petiolata, integerrima, coriacea, penninervia. Flores ♂ in amenta ad axillas foliorum glomerata dispositi, bracteis crebris 1–3-floris; ♀ pauci, in racemos axillares terminalesque dispositi. (*Char. ex Baill.*)

Species 2, Madagascarienses, a nobis non visæ. *Muell. Arg. in DC. Prod.* xv. ii. 445.

60. **Antidesma**, *Linn. Gen. n.* 1110.—Flores dioici, apetali. Fl. ♂: Calyx alte 3–5-lobus v. partitus, lobis segmentisve imbricatis. Discus e glandulis staminibus alternis distinctis v. subconcretis. Stamina 2–5, lobis calycis opposita; antheræ in alabastro inflexæ in flore aperto erectæ, loculis ad apices connectivi crassi sæpe curvi distinctis. Ovarii rudimentum parvum. Fl. ♀: Calyx maris. Glandulæ disci sæpius distinctiores, subplanæ. Ovarium 1-loculare, rarissime hinc inde 2-loculare; styli 3, brevissimi, sæpius 2-lobi; ovula in loculo gemina. Drupa parva, sæpius obliqua, indehiscens. Semen abortu unicum (rarissime 2), estrophiolatum; albumen carnosum; cotyledones planæ, latæ.—Arbores fruticesve. Folia alterna, sæpe majuscula. Flores parvi, ♂ sæpius minuti, racemosi v. spicati, racemis spicisve sæpius tenuibus, ad axillas solitariis v. in axillis superioribus v. ad apices ramorum paniculato-ramosis. Bracteæ parvæ.

Species editæ ultra 60, sed perplurimæ inter se ægre distinguendæ et in futuro reducendæ, regionum calidiorum orbis veteris incolæ, in Archipelago Malayano numerosæ, ab Africa tropica usque ad Australiam Japoniam et insulas maris Pacifici extensæ, in America desunt. *Tul. in Ann. Sc. Nat. ser.* 3, xv. 182. *Muell. Arg. in DC. Prod.* xv. ii. 248. *Benth. Fl. Austral.* vi. 85. *Kurz, For. Fl. Brit. Burm.* ii. 357. *Gærtn. Fruct.* i. *t.* 39. *Roxb. Corom. Pl. t.* 166 (*Stilago*) *et* 167. *Miq. Fl. Ind. Bat.* i. *t.* 25, 26. *Wight, Ic. t.* 766 *ad* 768, 819 *ad* 821. *Harv. Thes. Cap. t.* 169.

Stilago, *Schreb. Gen. Pl.* 608, genus propositum fuit ad species floribus 3-meris. Minutalia, *Fenzl in Flora*, 1844, 312, est *A. bifrons*, Tul., species a Muell. Arg. in *A. venoso*, Tul., inclusa.

A. acuminatum, Wight, Ic. t. 1991, ex horto Calcuttensi, species videtur *A. pubescenti*, Tul., valde affinis, a Muell. Arg. ex ordine expellitur ob flores ♀ ex icone interdum staminiferis, quod verisimiliter in specimine casu abnormi observatum fuit. In speciminibus nostris stamina in fl. ♀ omnino desunt.

Rhytis, *Lour. Fl. Cochinch.* 660, est, ex Muell. Arg. qui specimen auctoris vidit, *Antidesmatis* species, sed character Loureiri minime convenit. Nomen utique delendum.

61. **Hieronyma**, *Allem. Diss. Rio Janeiro*, 1848, *cum ic.* (Stilaginella, *Tul. in Ann. Sc. Nat. ser.* 3, xv. 240.)—Flores dioici, apetali. Fl. ♂: Calyx campanulatus, breviter sinuato-3–6-dentatus. Discus cupulatus v. cyathiformis, sæpe sinuato-lobatus. Stamina 2–5, intra discum calycis dentibus opposita, filamentis liberis; antheræ in alabastro inflexæ, in flore aperto erectæ, loculis in connectivo crasso distinctis at fere contiguis longitudinaliter dehiscentibus. Ovarii rudimentum parvum. Fl. ♀: Calyx maris. Discus margine subinteger. Ovarium 2-loculare; styli 2–3, brevissimi, 2-partiti, reflexi; ovula in loculis gemina. Drupa parva, 2-locularis v. sæpius abortu 1-locularis, exocarpio tenui, endocarpio duro osseo v. fibroso. Semen sæpius unicum, estrophiolatum; albumen carnosum; cotyledones planæ, latæ, basi sæpius cordatæ.—Arbores v. frutices elatiores, indumento tenuiter lepidoto v. rarius ferrugineo-tomentoso. Folia alterna, sæpe ampla, integerrima, petiolata, penninervia; stipulæ sæpius parvæ. Flores parvi, racemosi, racemis paniculato-ramosis axillaribus v. lateralibus. Bracteæ minimæ. Pedicelli breves, in fl. ♂ sæpius brevissimi.

Species descriptæ 10, Americæ tropicæ incolæ, nonnullæ ægre distinguendæ. *Muell. Arg. in DC. Prod.* xv. ii. 269, *et in Mart. Fl. Bras.* xi. ii. 21. *Tul. in Mart. Fl. Bras.* iv. i. 331, *t.* 87 *ad* 90.

Secretania, *Muell. Arg. in DC. Prod.* xv. ii. 227, planta Cayennensis ad specimen Sagotianum floribus ♂ nondum bene evolutis descripta adhuc valde dubia remanet, forte *Hieronymi* species, neutiquam e characteribus datis pro genere proprio recipienda.

62. **Mæsobotrya**, *Benth. in Hook. Ic. Pl. t.* 1296.—Flores dioici, apetali. Fl. ♂

Calyx 5-fidus, lobis leviter imbricatis. Disci glandulæ 5, staminibus alternæ. Stamina 5, receptaculo lato affixa, lobis calycinis opposita, filamentis liberis; antheræ erectæ, loculis ovoideis distinctis parallelis v. vix basi divergentibus, connectivo parvo. Ovarii rudimentum crassum, hirtellum. Fl. ♀: Calyx maris. Discus hypogynus cupulatus, margine integer. Ovarium 2-loculare; styli breves, crassiusculi, 2-fidi, recurvo-patentes; ovula in loculis gemina. Fructus (in speciminibus nondum maturus) globosus, ut videtur indehiscens, 2-locularis, loculo altero abortu vacuo altero 1-spermo, dissepimento plano membranaceo; pericarpium membranaceo-coriaceum. Semen immaturum orbiculatum, testa crassiuscula.—Frutex (v. arbor ?) glaber v. partibus novellis leviter hirtellis. Folia alterna, petiolata, majuscula, membranacea v. demum coriacea, integerrima, pennivenia; stipulæ minutæ. Flores parvi, racemosi, racemis axillaribus solitariis v. præsertim masculis fasciculatis, utriusque sexus floribundis.

Species 1, Africæ tropicæ incolæ.

63. **Æxtoxicon,** *Ruiz et Pav. Prod.* 131, *t.* 29; *Syst. Veg. Fl. Per. et Chil.* 260. (Ægotoxicon, *Dcne. in Ann. Sc. Nat. ser.* 4, ix. 279.)—Flores dioici, petaliferi, alabastris bractea globosa clausa demum irregulariter fissa deciduaque inclusis. Fl. ♂: Sepala 5, lata, valde imbricata, striata. Petala 5, concava, crenulata, basi contracta, nervo medio prominente. Stamina 5 (rarius 6–7 ?), glandulis disci totidem magnis alterna, filamentis liberis brevibus crassis supra discum incurvis; antheræ erectæ, adnatæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum breve. Fl. ♀: Calyx maris. Petala minora (v. 0 ?). Staminodia sæpius adsunt. Ovarium obliquum, 1-loculare; stylus incurvus, apice brevissime 2-fidus; ovula 2, uno tamen sæpe jam in alabastro minuto imperfectoque. Fructus ovoideus, carnosus, pericarpio in sicco indurato haud crasso, indehiscens. Semen unicum, testa membranacea; albumen (in semine unico examinato) carnosum, parce ruminatum; cotyledones orbiculato-cordatæ, dimidium albuminis excedentes.—Arbor, ramulis foliis inflorescentia bracteis ovarioque undique insigniter lepidotis. Folia alterna, breviter petiolata, integerrima, coriacea, pennivenia. Racemi axillares, breves; flores utriusque sexus pedicellati, ♀ in racemo pauci, ♂ numerosiores.

Species 1, Chilensis. *Hook. Ic. Pl. t.* 12. *Baill. Etud. Euph. t.* 27. *A. DC. Prod.* xvi. ii. 641. *Miers, Contrib. Bot.* ii. 125, *t.* 72.

Genus a variis auctoribus ad ordines diversos relatum, nobis rite a Hookero patre in *Euphorbiaceis* inclusum videtur, et a *Celastraceis* ubi collocat Miers longe remotum. Flores tam ♂ quam ♀, præter petalorum præsentiam, fere *Antidesmatis*, indumentum *Hieronymi*.

64. **Hymenocardia,** *Wall. Cat. Herb. Ind. n.* 3549; *Lindl. Introd. Nat. Syst. ed.* 2, 441. (Samaropyxis, *Miq. Fl. Ind. Bat. Suppl.* 464.)—Flores dioici, apetali. Discus 0. Fl. ♂: Calycis segmenta v. lobi 4–5 rarius 6, brevia, membranacea, imbricata, latiuscula. Stamina 4–5, rarius 6, filamentis calycem non excedentibus liberis v. basi in columnam connatis superne patentibus; antheræ magnæ, primum reflexæ, demum sæpius horizontales, loculis distinctis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum breve v. filamentis æquale. Fl. ♀: Sepala distincta, angusta, caducissima. Ovarium 2-loculare, septo contrarie plano-compressum; styli vix basi connati, longi, subteretes, indivisi, dense longeque papillosi; ovula in loculis gemina. Capsula plano-compressa, coccis 2 a columella secedentibus plano-cymbiformibus samaroideis dorso acutis v. sæpius superne v. circumcirca in alam productis, margine interiore post casum hiantibus, cæterum indehiscentibus; pericarpium subcrustaceum, endocarpio tenuissime membranaceo. Semina in coccis sæpius solitaria, plano-compressa, margine interdum anguste alata, testa tenui nitidula v. striata; albumen haud crassum; cotyledones planæ, latæ, tenuissimæ, radicula longiuscula.—Arbores v. frutices elatiores. Folia alterna, petiolata, membranacea v. coriacea, integerrima, pennivenia. Flores sub bracteolis solitarii, ♂ in spicis amentiformibus, ♀ in racemis brevibus laxis; spicæ ♂ sessiles laterales; racemi ♀ laterales v. axillares, per anthesin breves, bracteis pedicellisque brevibus, fructiferi laxi pedicellis elongatis bracteis sæpe in folia excrescentibus, racemis tunc in ramulos foliatos mutatis pedicellis ad axillas solitariis.

Species 5, quarum una a Peninsula Indica usque ad Archipelagum Malayanum extensa, cæteræ Africæ tropicæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 476. *Grant in Trans. Linn. Soc.* xxix. *t.* 94. *Oliv. in Hook. Ic. Pl. t.* 1131.

Kurz, in For. Fl. Burm. ii. 395, perperam *Hymenocardiæ* ovula in loculis solitaria tribuit et *Coccoceras plicatum*, Muell. Arg., ad hoc genus transtulit.

65. **Richeria,** *Vahl, Ecl.* i. 30, *t.* 4. (Podocalyx, *Klotzsch in Wiegm. Archiv.* vii. 202. Guarania, *Baill. Etud. Euph.* 598.)—Flores dioici, apetali. Fl. ♂: Sepala 3–4, parva, imbricata. Disci glandulæ distinctæ. Stamina 3–4, filamentis distinctis filiformibus; antheræ parvæ, loculis brevibus distinctis longitudinaliter dehiscentibus. Ovarii rudimentum breve, sæpe villosulum. Fl. ♀: Calyx maris. Discus annularis v. breviter urceolaris. Ovarium 3-loculare; styli breves, superne patentes, crassi, lati, integri v. breviter 2-fidi; ovula in loculis gemina. Capsula in coccos 2-valves dissiliens. Seminum testa subcrustacea; albumen carnosum; embryo rectus, cotyledonibus planis latis.—Arbores. Folia alterna, ampla, coriacea, integerrima, penninervia. Racemi v. spicæ axillares v. laterales, ♂ tenues, interrupti, floribus minimis secus rhachin glomeratis, glomerulis sessilibus v. stipatis; ♀ breves, densi, floribus subsessilibus sub quaque bractea solitariis. Bracteæ in utroque sexu minimæ.

Species 3, Brasiliæ, Guianæ et Indiæ occidentalis incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 467, *et in Mart. Fl. Bras.* xi. ii. 15, *t.* 13. *Pæpp. et Endl. Nov. Gen. et Sp.* iii. *t.* 226 (*Amanoa*).

Podocalyx in Prodromo pro sectione recipitur, antheris extrorsum nec introrsum birimosis, distinctio tamen nobis effugit. Antherarum loculi dorso appositi nobis videntur leviter introrsum v. demum extrorsum versi in utraque sectione.

66. **Thecacoris,** *A. Juss. Euph. Tent.* 12, *t.* 1.—Flores dioici, sæpius petaliferi. Fl. ♂: Sepala 5, membranacea, imbricata. Petala 5, parva, sub disco affixa, v. 0. Discus patens, 5-lobus, villosulus. Stamina 5, inter lobos disci affixa, sepalis opposita, filamentis liberis; antherarum loculi distincti, subglobosi, a connectivo crassiusculo penduli v. demum erecti. Ovarii rudimentum crassum, vertice subplanum, obtuse 3-lobum. Fl. ♀: Sepala quam in mare angustiora. Discus parum prominens. Ovarium 3-loculare; styli 3, distincti, longiusculi, recurvo-patuli, apice 2-fidi; ovula in loculis gemina. Capsula glabra, depressa, tridyma, in coccos 2-valves dissiliens. Semina perfecte matura non vidimus.—Arbores fruticesve præter inflorescentiam glabri. Folia alterna, sæpius ampla, rigidule membranacea, integerrima. Flores parvi, breviter pedicellati, racemosi, racemis axillaribus simplicibus v. subramosis folio multo brevioribus, utriusque sexus multifloris. Bracteæ parvæ, rarius pedicellis longiores subulatæ.

Species 4, Africæ tropicæ et Madagascariæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 246. Speciem typicam Madagascariensem petalis 0 non vidimus. Character supra datus ex speciebus Africanis sæpius petaliferis.

67. **Cyathogyne,** *Muell. Arg. in Flora,* 1864, 536, *et in DC. Prod.* xv. ii. 226.—Flores dioici, apetali. Fl. ♂: Sepala 5, membranacea, imbricata. Discus e glandulis parvis. Stamina 5, sepalis opposita, filamentis liberis; antherarum loculi paralleli, distincti, in alabastro penduli, in flore aperto divergentes v. divaricati vix erecti, longitudinaliter dehiscentes. Ovarii rudimentum in discum cyathiformem membranaceum late 3-lobum breviter stipitatum expansum. Fl. ♀: Calyx fere maris. Ovarium depressum, 3-sulcum, 3-loculare; styli distincti, apice introrsum linea crassa stigmatosa apice 2-fida instructi; ovula in loculis gemina. Capsula . . .—Herba erecta, subsimplex, pallide virens, caule basi duro (perenni?). Folia alterna, petiolata, majuscula, acuminata, integerrima v. leviter sinuata; stipulæ setaceæ, caducæ. Flores minimi, racemosi, ♂ subsessiles, ♀ evidentius pedicellati, racemis axillaribus filiformibus simplicibus v. parce ramosis. Fructum non vidimus, sed ex ovario parum aucto verisimiliter in coccos 2-valves divellitur.

Species 1, Africæ tropicæ occidentalis incola. *Hook. Ic. Pl. t.* 1278.

68. **Dicoelia,** *Benth. in Hook. Ic. Pl. t.* 1289.—Flores monoici, petaliferi. Discus 0.

Fl. ♂: Calyx parvus, 5-fidus. Petala 5, valvata, crassa, extus convexa, intus apice crasso-carnosa, infra medium concava, linea elevata centrali quasi in locellos 2 divisa. Stamina 5, petalis alterna, filamentis brevibus distinctis; antherarum loculi majusculi, paralleli, discreti, in alabastro in locellis petalorum contiguorum recepti. Ovarii rudimentum 3-5-fidum, lobis ultra petala in appendices lineares hamatas productis. Fl. ♀: Calyx alte 5-fidus, petalis paullo brevior. Petala ovata, obtusa, concava, haud incrassata, leviter imbricata. Ovarium subglobosum, 3-sulcum, pubescens, 3-loculare; styli distincti v. vix basi connati, lineares, rigiduli, erecti, indivisi, apice inflexi breviterque stigmatoso-dilatati; ovula in loculis gemina, sub obturatore unico.—Fructus . . . Frutex v. arbor. Folia alterna, petiolata, ampla, tenuiter coriacea, integerrima, glabra, pennivenia. Racemi axillares, foliis breviores, minute puberuli. Flores parvi, pedicellati, secus rhachin dissite fasciculati, fasciculis plerisque androgynis, flore centrali fœmineo, cæteris masculis, v. interdum omnes masculi.

Species unica, Borneensis.

Genus petalorum forma singulari *Galeariæ* accedit, differt tamen racemis axillaribus monoicis et ovulis in loculis geminis.

Tribus V. Galearieæ.

69. **Galearia**, *Zoll. et Mor. Verz. Zolling, Pfl.* 19. (Bennetia, *R. Br. in Benn. Pl. Jav. Rar.* 249, *t.* 50. Cremostachys, *Tul. in Ann. Sc. Nat. ser.* 3, xv. 259.)—Flores dioici, petaliferi. Discus 0. Fl. ♂: Calyx parvus, 5-dentatus v. 5-fidus. Petala 5, concava, induplicata v. cucullata, subvalvata. Stamina 10, 2-seriata, filamentis crassiusculis liberis, 5 exterioribus petalis alternis valde inflexis, 5 interioribus brevioribus petalis oppositis v. subinclusis; antherarum loculi paralleli, distincti, nunc laterales æquales contigui, nunc inæquales majore extrorsum late aperto interiore minore, nunc oblongi æquales a connectivo penduli. Ovarii rudimentum staminibus subæquilongum. Fl. ♀: Calyx minutus. Petala maris. Ovarium 2- rarius 3-loculare; styli breves, patentes, 2-partiti, ramis tenuibus; ovula in loculis solitaria, jam sub anthesi latiora quam longa. Fructus drupaceus, transverse oblongus, exocarpio carnoso, endocarpio crustaceo 2-loculari v. abortu 1-loculari. Semina transversim oblonga, compressa, testa membranacea; albumen carnosum; cotyledones latæ, planæ.—Arbusculæ v. frutices glabri v. tenuiter puberuli. Folia alterna, breviter petiolata, sæpius ampla, integerrima, pennivenia. Racemi terminales, tenues, utriusque sexus elongati floribundi. Flores parvi, ♂ sub bracteis glomerati subsessiles v. longiuscule pedicellati, ♀ sub quaque bractea pauci v. solitarii. Bracteæ minutæ v. subulatæ.

Species descriptæ 12, nonnullæ inter se forte nimis affines, aliæ etsi aspectu similes, quoad antheras facile distinctæ, omnes Indiæ Malaccensis v. Archipelagi Malayani incolæ.—*Muell. Arg. in DC. Prod.* xv. ii. 1036, sub *Bennetia*, nomen tamen anno 1852 (nec 1844) in parte ultima Plantarum Javanicarum editum. *Galearia* jam anno 1846 edita fuit, *Cremostachys* anno 1851. *Kurz, For. Fl. Brit. Burm.* ii. 407.

70. **Microdesmis**, *Planch. in Hook. Ic. Pl. t.* 758, *et Fl. Nig. t.* 26.—Flores dioici, petaliferi. Fl. ♂: Calyx 5- (rarius 4- v. 6- ?) partitus, segmentis leviter imbricatis. Petala totidem, calyce longiora, contorto-imbricata. Stamina 5 v. 10, 1-2-seriata, receptaculo carnoso imposita, seriei exterioris petalis alterna, filamentis liberis; antheræ erectæ, loculis parallelis v. subparallelis distinctis longitudinaliter dehiscentibus. Ovarii rudimentum columnare ovoideum v. 3-fidum. Fl. ♀: Perianthium maris. Ovarium carnosum, basi minute 2- v. rarius 3-loculare; styli breves, 2-partiti, nunc brevissimi, patentes, papilloso-laceri; ovula in loculis solitaria. Drupa indehiscens, putamine osseo extus rugoso. Semina late ovoidea, testa membranacea v. vix crustacea; albumen carnosum, haud crassum; cotyledones ovatæ, planæ.—Frutices ramis virgatis. Folia alterna, breviter petiolata, integerrima v. breviter dentata, pennivenia, in specie Africana 5-andra minute pellucido-punctata, in Asiatica 10-andra impunctata. Flores minimi, breviter pedicellati, ad axillas fasciculati, ♂ sæpius numerosi, ♀ pauci v. subsolitarii.

Species bene notæ 2, altera 5-andra Africæ tropicæ, altera 10-andra Asiæ tropicæ a *Zeylania* usque ad Archipelagum et Chinam extensa. *Muell. Arg. in DC. Prod.* xv. ii. 1041. Fructus bene maturus in specie Asiatica sola rite observatus, cui verisimiliter addenda species tertia Borneensis, *Beccari* n. 3713, cujus flores pauci tantum ♂ in specimine nostro adsunt, et PENTABRACHION, *Muell. Arg in Flora*, 1864, 532, *et in DC. Prod.* xv. ii. 223, ex Africa tropica, cujus specimina ♂ sola adhuc nota, in habitu omnibusque characteribus *Microdesmi* convenit, exceptis petalis calyce paullo brevioribus.

71. **Pogonophora,** *Miers*; *Benth. in Hook. Kew Journ.* vi. 372.—Flores dioici, petaliferi. Fl. ♂: Calyx parvus, 5-partitus, segmentis imbricatis. Petala 5, calyce longiora, imbricata, intus medio barbata. Stamina 5, calycis segmentis opposita, sub disco crasso depresso affixa, filamentis brevibus liberis; antheræ lineares, apiculatæ, loculis adnatis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum lineare, 3-fidum. Fl. ♀: Perianthium maris. Discus breviter cupulatus. Ovarium 3-loculare; styli basi breviter connati, superne patentes, apice stigmatoso dilatato 2-lobo v. fimbriato; ovula in loculis solitaria. Capsula ovoidea, in coccos 2-valves dissiliens, endocarpio duro. Semina ovoidea, testa crustacea nitida; albumen carnosum; cotyledones planæ, latæ.—Frutex v. arbor debilis, inflorescentia excepta glaber. Folia alterna, petiolata, integerrima, coriacea, penninervia. Flores parvuli, in racemulis compositis seu paniculis parvis axillaribus, secus rhachin in glomerulos breviter pedunculatos dispositi, ♂ in glomerulis sessiles, ♀ breviter pedicellati. Capsulæ parvulæ.

Species 1, Brasiliæ et Guianæ incola. *Muell. Arg. in DC. Prod.* xv. ii. 1040, *et in Mart. Fl. Bras.* xi. ii. 435, *t.* 62. *Baill. Etud. Euph. t.* 19.

72. **Tetrorchidium,** *Pæpp. et Endl. Nov. Gen. et Sp.* iii. 23, *t.* 227.—Flores dioici v. monoici, apetali. Fl. ♂: Calyx parvus, 3-partitus, segmentis latis leviter imbricatis. Discus 0. Stamina 3, calycis segmentis opposita, filamentis brevissimis, in alabastro in massam subglobosam connata, demum vix libera; antheræ subsessiles, erectæ, latæ, introrsum subæqualiter 4-locellatæ, 4-valves. Ovarii rudimentum clavatum antheris æquilongum v. minutum (v. 0 ?). Fl. ♀: Calyx maris. Discus cyathiformis v. in ligulas 3 petaloideas divisus. Ovarium 2-3-loculare; styli breves, plani, crassi, 2-fidi, stellatim patentes, nunc fere in orbem connati; ovula in loculis solitaria. Capsula 2-3-dyma, in coccos 2-valves dissiliens, endocarpio tenuiter crustaceo. Semina globosa, testa crustacea duriuscula extus carnosa; albumen carnosum, haud crassum; cotyledones planæ, latæ.—Arbores fruticesve glabri v. pubescentes. Folia alterna, petiolata, ampla v. mediocria, integerrima v. dentata, penninervia, petiolo apice sæpe 2-glanduloso. Racemi axillares, tenues, floribus dissitis, ♂ elongati, simplices v. breviter ramosi, floribus parvis subsessilibus; ♀ et androgyni sæpius breviores, simplices, nunc brevissimi v. ad florem unicum pedunculatum reducti.

Species 4, Americæ tropicæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1133, *et in Mart. Fl. Bras.* xi. ii. 511, *t.* 71. Genus valde anomalum, quoad affinitates adhuc dubium. Antheræ fere *Cleidii* v. *Endospermi*, sed staminum situs, ovarii rudimentum, etc., ab illis abhorrent. *T. parvulum*, Muell. Arg., a cæteris habitu differt: pedunculi in specimine nostro Riedeliano omnes breves tenues flore unico ♀, in speciminibus Glazioviani plures adsunt paullo longiores 2-3-flori, flore terminali ♀, inferioribus 1-2 ♂.

TRIBUS VI. CROTONEÆ.

73. **Elateriospermum,** *Blume, Bijdr.* 620.—Flores monoici, apetali. Fl. ♂: Calyx subglobosus, sepalis 4-5 latis valde imbricatis. Stamina ∞ (10-18), receptaculo villoso crassiusculo imposita, filamentis brevibus liberis; antheræ oblongæ, erectæ, loculis adnatis parallelis longitudinaliter dehiscentibus, connectivo apice glanduliformi coronato. Ovarii rudimentum 0 v. minutum. Fl. ♀: Sepala imbricata, caduca. Discus margine elevatus, pubescens, subinteger. Staminodia sæpius ∞, parva, disco introrsum affixa. Ovarium 3-loculare; styli crassi, primum brevissime erecti subconnati, demum parum elongati, apice in stigmata crassa brevia patentia sublobata dilatati; ovula in loculis

solitaria. Capsula magna, in coccos 2-valves dissiliens, exocarpio subcarnoso, endocarpio duro. Semina magna, oblonga, testa crustacea nitida; albumen ? membranaceo-papyraceum embryonem includens; cotyledones magnæ, crasso-carnosæ, radicula brevissima ad basin cotyledonum retracta.—Arbor pulcherrima, coma densa oblonga (*Griff.*). Folia alterna, longe petiolata, subcoriacea, integerrima, pennivenia et tenuiter reticulato-venulosa. Cymæ laxe dichotomæ, pedunculis ad apices ramorum v. ad basin innovationum pluribus, paniculam laxam foliis breviorem formantibus. Flos cymæ centralis ♀, sessilis; laterales ♂, haud numerosi. Semina sub-pulposo-arillata dicuntur, quod tamen in speciminibus nostris haud apparet.

Species 1, Peninsulæ et Archipelagi Malayani incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1131. *Baill. Etud. Euph. t.* 19. *Hook. Ic. Pl. t.* 1294.

74. **Cunuria**, *Baill. Adans.* iv. 287. (Clusiophyllum, *Muell. Arg. in Flora*, 1864, 518.)—Flores dioici, apetali. Fl. ♂: Sepala 5, lata, valde imbricata. Discus 0. Stamina 10, receptaculo valde elevato affixa, filamentis brevibus liberis; antheræ dorsifixæ, loculis subparallelis connectivo latiusculo adnatis longitudinaliter dehiscentibus. Ovarii rudimentum villosulum, integrum, staminibus paullo brevius. Fl. ♀ (a nobis non visi): Perianthium maris. Discus cupuliformis glanduloso-6-8-lobus (*Baill.*) v. 0 (*Muell. Arg.*). Ovarium 3-loculare; styli crassi, 2-fidi, reflexi, ovario adpressi; ovula in loculis solitaria (*Baill.*). Capsula magna, subglobosa, in coccos 2-valves dissiliens, exocarpio carnoso; endocarpio crasso lignoso. Semina magna, ovoidea, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Arbores vastæ, glabræ. Folia alterna, petiolata, integerrima, coriacea, pennivenia, limbo supra ad basin 2-glanduloso. Pedunculi axillares v. laterales (v. primum terminales ?), sæpe 2–3-ni, folio multo breviores, ♂ simplices v. parce ramosi, ramis apice cymam paucifloram ferentibus floribus ternatim sessilibus; ♀ fructus 1–3 gerentes.

Species 2, Brasiliæ borealis incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1123, *et in Mart. Fl. Bras.* xi. ii. 509, *t.* 14.

Genus, inflorescentia et floribus ♀ in speciminibus nostris imperfecte evolutis, quoad affinitates dubium, ex Spruceo *Heveæ* evidenter proximum, quod etiam ex observationibus nostris comprobari videtur.

75. **Micrandra**, *Benth. in Hook. Kew Journ.* vi. 371. (Pogonophyllum, *Didrichs. in Vidensk. Meddel. Nat. For. Kjöbenh.* 1857, 144.)—Flores monoici (v. interdum dioici ?), apetali. Fl. ♂: Sepala 5, valvata v. leviter imbricata. Glandulæ disci staminibus alternæ. Stamina 5, sepalis alterna, circa discum subplanum affixa, filamentis liberis apice in alabastro inflexis demum erectis; antheræ sub anthesi erectæ, breves, adnatæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum minutum, in medio disco vix conspicuum. Fl. ♀: Sepala caducissima. Discus annularis, tenuis. Ovarium 3-loculare; styli brevissimi, crassi, lati, retusi, basi subconnati; ovula in loculis solitaria. Capsula globosa, vix in coccos secedens, dehiscentia et semina imperfecte nota.—Arbores proceræ, succo lacteo *Heveæ*. Folia alterna, ampla, indivisa, integerrima, pennivenia, petiolo longiusculo. Flores parvuli, cymulosi, cymulis laxe paniculatis, paniculis terminalibus v. infra folia lateralibus, rarius ad axillas pedunculatis.

Species 2 v. 3 Brasilianæ. *Muell. Arg. in DC. Prod.* xv. ii. 709, *et in Mart. Fl. Bras.* xi. ii. 289, *t.* 42, ubi *M. minor*, Benth., ad varietates *M. siphonioidis* reducitur. Folia præbet *M. elata*, Muell. Arg., glandulis baseos in utraque parum conspicuis v. 0, cum floribus *M. siphonioidis*.

76. **Avellanita**, *Philippi in Linnæa* xxxiii. 237.—Flores monoici, (apetali ?). Fl. ♂: Calyx in alabastro globosus, per anthesin 5-partitus, segmentis valvatis. Stamina numerosa, in globum coalita, filamentis apice liberis; antherarum loculi globosi. Fl. ♀: Calyx paullo minor quam in mare, 5-partitus, segmentis lineari-lanceolatis. Ovarium globosum, dense puberulum, 3-loculare; styli erecti, longiusculi, indivisi; ovula in loculis solitaria. Capsula depressa, 3-cocca, endocarpio crustaceo-lignoso. Semina subglobosa, estrophiolata, lævia; embryo rectus, cotyledonibus subrotundo-ovatis.—Frutex haud

lactescens. Folia alterna, breviter petiolata, oblongo-lanceolata, integerrima, fere triplinervia, floralia fere verticillata. Flores terminales 3-4, uno ♀, cæteris ♂, bracteis linearibus circumdati. (*Char. ex Philippi.*)

Species 1, in provincia Chilensi Colchagua lecta, a nobis non visa.

77. **Hevea**, *Aubl. Pl. Gui.* 871, *t.* 335. (Siphonia, *Schreb. Gen. Pl.* 656. **Micrandra**, *R. Br. in Benn. Pl. Jav. Rar.* 237.) —Flores monoici, apetali. Fl. ♂: Calyx in alabastro ovoideus v. globosus, breviter nunc minute 5-lobus, per anthesin apertus, truncatus 5-dentatus v. 5-lobus. Disci glandulæ parum conspicuæ. Stamina 5-10, filamentis in columnam connatis; antheræ circa columnam irregulariter v. regulariter 1-2-seriatim subsessiles, seriei inferioris lobis perianthii alternæ. Ovarii rudimentum columnam terminans, antheris sæpius longius. Fl. ♀: Calyx maris. Ovarium ovoideum, 3-loculare; stigmata crassa, patentia, sub-2-loba, in vertice ovarii v. styli brevis adnata; ovula in loculis solitaria. Capsula magna, in coccos bivalves dissiliens, exocarpio subcarnoso, endocarpio crasso sublignoso. Semina magna, oblonga, lævia, estrophiolata, testa crustacea; albumen 0 v. ad pelliculam tenuem reductum; cotyledones crassæ, carnosæ, æquales, radicula brevi subinclusa.—Arbores proceræ, succo lacteo *Caoutchouc* præbente scatentes. Folia alterna, longe petiolata, 3-foliolata, foliolis petiolulatis integerrimis penniveniis membranaceis v. coriaceis. Flores parvuli, cymulosi, cymulis paniculatis, flore centrali cujusve cymulæ sæpius ♀, cæteris ♂.

Species 9, Americæ tropicæ regionis Amazonum v. Guianæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 717, *et in Mart. Fl. Bras.* xi. ii. 297, *t.* 44. *A. Juss. Euph. Tent. t.* 12. *Baill. Etud. Euph. t.* 14. *Klotzsch in Hayne, Arzneigew.* xiv. *t.* 4, 5. *Collins, Rep. Caoutch. t.* 1 (*ic. plur. sub Siphonia*).

Genus naturalissimum, vix in sectiones dividendum. In *H. guianensi*, Aubl., quæ *Euhevea*, Muell. Arg., alabastra globosa, calyx minute 5-dentatus v. vix altius in lobos divisus, antheræ 5, 1-seriatæ. In *H. peruviana*, Lechl. (adhuc inedita?), e Peruvia orientali, calyx vix altius fissus, et antheræ in floribus examinatis 5, sed in serie minus perfecta disposita. In cæteris speciebus alabastra ovoidea v. acuminata, calyx demum sæpius ad medium lobatus, antheræ nunc 6-7 irregulariter affixæ, nunc 8-10 in verticillos 2 subregulares distantes dispositæ.

78. **Joannesia**, *Velloso, Alograf.* 199, *cum ic.*, *non Pers.* (Anda, *A. Juss. Euph. Tent.* 39, *t.* 12, *non Piso.* Andicus, *Vell. Fl. Flum.* 80; *Ic.* ii. *t.* 86.)—Flores monoici, petaliferi. Fl. ♂: Calyx in alabastro globosus, subclausus, per anthesin late campanulatus, truncatus, brevissime 5-dentatus. Petala sub anthesi calyce multo longiora, valde imbricata. Stamina 7-10, receptaculo conico affixa, exteriora fere ad basin receptaculi petalis opposita, glandulis parvis alternis interdum obsoletis, filamentis brevibus liberis; antheræ erectæ, oblongæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0 v. rarius hinc inde ad apicem receptaculi 2-fidum Fl. ♀: Calyx maris. Petala caducissima, quam in ♂ angustiora. Squamellæ hypogynæ 5, breves. Ovarium 2-loculare; styli brevissimi, apice incrassati, dentati v. breviter lobati, caducissimi; ovula in loculis solitaria. Drupa ovoidea, exocarpio carnoso demum a basi in valvas 4 secedente, endocarpio lignoso 2-loculari. Seminum testa crustacea, extus carnosula; albumen carnosum; embryo rectus, cotyledonibus latis planis.—Arbor procera, fere a basi ramosa. Folia alterna, longe petiolata, digitatim 5-foliolata, foliolis petiolulatis integerrimis, glandulis ad basin petiolulorum. Flores dichotome cymosi, cymis floribundis ad apices ramorum dense paniculatis, in dichotomiis inferioribus fœmineis, in superioribus masculis, v. rarius cymæ unisexuales.

Species 1, Brasiliana. *Gomez in Mem. Acad. Lisb.* iii., *Mem. Corresp.* 6. *t.* 1. *Muell. Arg. in DC. Prod.* xv. ii. 715, *et in Mart. Fl. Bras.* xi. ii. 296, *t.* 43 (*Johannesia*). *A. St. Hil. Pl. Us. Bras. t.* 54, 55 (*Anda*).

Calycis dentes induplicato-valvati dicuntur, minimi sunt et nisi in prima juventute inter se distantes, in alabastris novellis conniventes subvalvatos nec induplicatos invenimus. Velloso uti Gomez nomen genericum scripsit *Joannesia* nec *Johannesia*.

79. **Jatropha**, *Linn. Gen. n.* 1084.—Flores monoici, sæpius petaliferi. Fl. ♂: Calycis

segmenta v. lobi 5, imbricata. Petala 5, contorto-imbricata, in corollam 5-lobam connata v. libera v. calyce petaloideo 0. Discus integer v. 5-glandulosus. Stamina ∞, receptaculo 2-∞-seriatim affixa, filamentis saltem interioribus plus minus in columnam connatis, 5 exteriora petalis opposita; antheræ ovatæ v. oblongæ, erectæ, loculis parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx maris. Petala haud raro desunt. Ovarium 2–3- rarius 4-loculare; styli basi connati, superne patentes, in ramos 2 integros v. 2-fidos sæpius breves divisi; ovula in loculis solitaria. Capsula ovoidea v. subglobosa, vertice sæpius subplana, in coccos 2-valves dissiliens, endocarpio crustaceo v. indurato. Semina ovoidea v. oblonga, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Herbæ elatiores fruticesve, rarius arborescentes, ramis interdum carnosulis, rarius aculeis sparsis v. geminis rectis armatis. Folia alterna, petiolata, indivisa v. (interdum in eadem planta) digitatim 3–∞-lobata v. partita, segmentis integris v. sinuato-pinnatifidis, indumento simplici interdum glanduloso. Stipulæ haud raro in cilia divisæ. Flores ad apices ramorum in paniculas dichotome cymosas dispositi, ♀ sæpius in dichotomiis primariis, cæteris ♂.

Species enumeratæ 68, regionum calidiorum utriusque orbis imprimis Americæ incolæ, extra tropicos in America septentrionali et Africa australi parum extensæ. *Muell. Arg. in DC. Prod.* xv. ii. 1076, *et in Mart. Fl. Bras.* xi. ii. 487, *t.* 68, 69.

Genus inflorescentia pluribusque characteribus *Joannesiæ* potius quam *Manihoto* accedit, facile distinguitur calyce et fructu. In sectiones 3 sequentes sat distinctas dividitur:—

1. *Curcas.* Calyx alte 5-fidus. Petala ultra medium in corollam urceolatam 5-lobam cohærentia. Stamina 10, v. serie interiore imperfecta pauciora. Species Americanæ, quarum una in orbe vetere late culta v. inquilina. *Jacq. Hort. Vind.* iii. *t.* 63. *Wight, Ic. t.* 1169. CURCAS, *Adans. Fam.* ii. 356. CASTIGLIONIA, *Ruiz et Pav. Prod.* 139, *t.* 37, *et Syst. Veg. Fl. Peruv.* 275. MOZINNA, *Orteg. Dec.* 104, *t.* 13. *Benth. Bot. Sulph. t.* 25. *Hook. Ic. Pl. t.* 357. LOUREIRA, *Cav. Ic.* v. 17, *t.* 429, 430. In una specie, *J. spathulata*, Muell. Arg. (*Mozinna*, Ort.), frutex Mexicanus ramis succulentis, panicula sessilis simplex, floribus cum foliis parvis ad nodos pulviniformes fasciculatis, habitum fere *Acidocrotonis* præbens.

2. *Adenoropium.* Calyx alte 5-fidus, sæpe brevis coloratusque. Petala libera v. basi breviter cohærentia. Stamina 10, v. serie interiore imperfecta pauciora. Species plures utriusque orbis, imprimis Americanæ et Africanæ. *Vent. Jard. Malm. t.* 52. *Andr. Bot. Rep. t.* 267. *Salisb. Parad. Lond. t.* 91. *Bot. Mag. t.* 604, 1464, 4376. *Bot. Reg. t.* 746. *Lodd. Bot. Cab. t.* 1604. *Maund, Botanist, t.* 107. ADENOROPIUM, *Pohl, Pl. Bras. Ic.* i. 12, *t.* 9.

3. *Cnidoscolus.* Calyx ♂ petaloideus, tubo sæpius longiusculo, limbo patente 5-lobo, ♀ 5-partitus. Petala 0. Stamina 10–25. Species omnes Americanæ. *Jacq. Hort. Vind. t.* 21. JUSSIEVIA, *Houst. Reliq.* 6, *t.* 15. CNIDOSCOLUS, *Pohl, Pl. Bras. Ic.* i. 56, *t.* 49 *ad* 52. Sectio facile pro genere proprio retinenda.

J. Heudelotii, Baill., inter *Adenoropia* in Prodromo recepta, est *Ricinodendron africanum*.

80. **Acidocroton,** *Griseb. Fl. Brit. W. Ind.* 42.—Flores monoici, petaliferi. Fl. ♂: Calyx parvus, patens, alte 5–6-fidus. Petala 5–7, calyce majora, patentia, contorto-imbricata. Stamina ∞ (ad 30), receptaculo disciformi pubescenti imposita, filamentis liberis; antheræ breves, erectæ, loculis distinctis connectivo latiusculo adnatis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx maris. Petala rudimentaria (*Muell. Arg.*) (v. caducissima?). Ovarium 3-loculare (3–5-loculare, *Muell. Arg.*); styli plani, patentes, crassi, late obovati, retusi, basi brevissime connati; ovula in loculis solitaria. Capsula (a nobis non visa) in coccos 2-valves dissiliens. Semina . . .—Fruticulus ramosissimus aculeis geminis infrastipularibus rectis divaricatis horridus. Gemmæ foliatæ pulviniformes, aculeis breviores, foliis paucis parvis obovatis crassis integerrimis. Flores inter folia pauci, parvuli, subsessiles.

Species 1, Cubensis. *Muell. Arg. in DC. Prod.* xv. ii. 1042. Genus quoad flores ♀ adhuc imperfecte notum, evidenter *Jatrophæ* (*Mozinnæ*) affine. ACIDOTON, P. Br., species potius quam genus, planta Jamaicensis, huc a Muell. Arg. in DC. l. c. 732 et 924, docente Grisebachio refertur, ab eo tamen rectius l.c. 1042 excluditur, nam descriptio Brownei Hist. Jam. 355 et Elmgrenii in Linn. Amœn. Acad. v. 411, ex speciminibus ♀ solis instructa cum *Acidocrotone* minime convenit, et verisimiliter planta a Linnæo rite in *Adelia* inclusa.

81. **Tritaxis**, *Baill. Etud. Euph.* 342, *t.* 11. (Trigonostemonis *sect.* Tritaxis *et* Antitaxis, *Muell. Arg. in DC. Prod.* xv. ii. 1107.) — Flores monoici? petaliferi. Fl. ♂: Calyx 3-fidus, lobis sæpius brevibus subimbricatis. Petala 5, calyce longiora. Disci glandulæ ad basin columnæ 5. Stamina in verticillos 2 v. 3 circa columnam centralem tenuem disposita, 5 verticilli inferioris prope basin columnæ, 5 verticilli secundi dum adsint in media columna, 2 v. 3 filamentis brevibus columnam terminantibus; antheræ verticillorum inferiorum erectæ, loculis introrsum parallelis longitudinaliter dehiscentibus, staminum terminalium horizontales. Ovarii rudimentum 0. Fl ♀ (a nobis non visi): Calyx et petala maris. Ovarium 3-loculare; styli 2-fidi. Capsulæ cocci 2-valves (*Baill.*).—Arbores fruticesve. Folia alterna, petiolata, integerrima v. dentata, glabra v. subtus puberula. Flores ad apices ramorum dichotome cymosi, ♀ (centralis?) subsessilis, ♂ plures pedicellati parvi.

Species 3 v. 4, Indiæ orientalis et Archipelagi Malayani incolæ. *Benth. in Journ. Linn. Soc.* xvii. 221.

82. **Aleurites**, *Forst. Char. Gen.* 111, *t.* 56.—Flores monoici v. subdioici, petaliferi. Fl. ♂: Calyx junior globosus, clausus, per anthesin in lobos 2-3 valvatim ruptus. Petala 5, calyce longiora. Stamina ∞ (8-20), receptaculo conico affixa, 5 exteriora petalis opposita glandulis parvis alterna, filamentis liberis brevibus v. elongatis; antheræ erectæ, adnatæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Perianthium maris. Discus inconspicuus, v. glandulæ minutæ petalis alternæ. Ovarium 2-5-loculare; styli in ramos 2 crassiusculo lineares divisi; ovula in loculis solitaria. Fructus magnus, drupaceus, indehiscens, exocarpio carnoso haud crasso, endocarpio crustaceo v. duro 2-5-loculari v. abortu 1-loculari. Seminum testa crassa, lignosa; albumen crassum, durum; embryo rectus, cotyledonibus latis planis.—Arbores indumento stellari v. subsimplici. Folia alterna, longe petiolata, ampla, basi 5-7-nervia, integerrima v. 3-loba, petiolo apice 2-glanduloso. Flores laxe cymosi, cymis ad apices ramorum paniculatis.

Species editæ 3, Asiæ orientalis et insularum maris Pacifici indigenæ, sectiones 3 formantes, quas facile pro generibus propriis haberes.—*Muell. Arg. in DC. Prod.* xv. ii. 723. *Baill. Etud. Euph. t.* 12.

1. *Camirium.* Alabastra globosa. Stamina 15-20. Pistillum 2-merum. Panicula lata, dense floribunda. Species 1, ex ins. maris Pacifici per regiones tropicas utriusque orbis late dispersa culta v. inquilina. CAMIRIUM, *Gærtn. Fruct.* ii. 194, *t.* 125.

2. *Elæococca.* Alabastra ovoidea. Stamina 8-12, filamentis quam in *Camirio* longioribus, interioribus (an semper?) apice reflexis. Flores in panicula laxa pauciores magni. Pistillum 3-5-merum. ELÆOCOCCA, *A. Juss. Euph. Tent.* 38, *t.* 11. DRYANDRA, *Thunb. Fl. Jap.* 13, *t.* 27. *Correa in Ann. Mus. Par.* viii. *t.* 32. VERNICIA, *Lour. Fl. Cochinch.* 586.

3. *Reutiales.* Species ex ins. Philippinis a nobis non visa, ab *Elæococca* differre dicitur antheris ad 8, extrorsum nec introrsum 2-rimosis.

His verisimiliter addendæ species 2 Americanæ, altera Mexicana *Errendberg n.* 373, altera Guianensis *Rob. Schomburgk n.* 474, *Rich. Schomburgk n.* 759, quarum flores ♂ tantum noti, qui tamen characteres omnes sectionis *Camirii* ostendunt.

83. **Gareta**, *Rohr in Skrivt. Nat. Hist. Selsk. Kjöbenh.* ii. (1792) 217, *t.* 9.—Flores monoici (v. dioici?), petaliferi. Discus annularis v. in squamellas subdivisus. Fl. ♂: Calyx membranaceus, in alabastro globosus, clausus, per anthesin in lacinias 2-3 valvatim ruptus. Petala 8-12, angusta, longe sericea, calycem superantia, squamellis parvis alterna. Stamina numerosa, receptaculo convexo pilosiusculo affixa, filamentis liberis apice in connectivum continuum incrassatis; antheræ erectæ, loculis adnatis parallelis v. divergentibus longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx maris, cum petalis sæpe numero paucioribus caducissimus. Ovarium 3-loculare; stylus brevis, ramis stigmatosis (v. stylis distinctis) crassis latis patentibus reflexisque emarginato-bifidis; ovula in loculis solitaria. Capsula majuscula, in coccos 2-valves dissiliens, endocarpio duro sublignoso. Semina globosa; embryo . . .—Arbores. Folia alterna, petiolata,

ampla, membranacea, integerrima, pennivenia. Flores ad apices ramorum pauci, breviter pedicellati, in speciminibus nostris 1–3-ni.

Species 1, Indiæ occidentalis, Columbiæ et Americæ centralis incola. *Muell. Arg. in DC. Prod.* xv. ii. 721. *A. Juss. Euph. Tent. t.* 13. *Baill. Etud. Euph. t.* 14.

84. **Croton,** *Linn. Gen. n.* 1083. — Flores monoici v. rarius dioici, sæpius petaliferi. Fl. ♂: Calyx alte v. ad basin divisus in lobos v. segmenta 5 rarius 4 v. 6, valvata v. anguste imbricata. Petala calyci æqualia v. breviora, rarius deficientia. Disci glandulæ v. squamæ nunc calycis basi affixæ v. adnatæ nunc staminibus exterioribus alternæ. Stamina ∞, pauca plurima v. numerosissima, receptaculo affixa, exteriora v. omnia si calycis segmentis isomera iis alterna, filamentis liberis apice in alabastro inflexis per anthesin erectis; antheræ adnatæ, in alabastro filamentorum inflexione pendulæ, sub anthesi erectæ, loculis parallelis introrsum contiguis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calycis segmenta quam in mare sæpius angustiora, calyx tamen totus interdum post anthesin auctus dilatatusque. Petala quam in mare minora et in speciebus perplurimis minuta rudimentaria v. omnino deficientia. Discus annularis v. e squamulis distinctis ad basin calycis. Ovarium 3-loculare, rarissime 2- v. 4-loculare; styli recurvi, semel v. bis bifidi v. partiti rarius dichotome multifidi; ovula in loculis solitaria. Capsula in coccos 2-valves dissiliens. Semina lævia, strophiola parva; testa crustacea v. indurata; albumen copiosum, carnosum; embryo rectus, cotyledonibus latis planis.—Arbores frutices v. rarius herbæ, habitu valde diverso. Indumentum e pilis stellatis sæpe ferrugineis v. canescentibus v. e squamellis haud raro metallice nitentibus copiosum v. sparsum v. rarius deest. Folia alterna v. rarissime opposita v. sub inflorescentia subverticillata, integerrima dentata v. rarius 3–5-loba, pennivenia v. basi 3–∞-nervia. Glandulæ 2 ad apicem petioli v. ad basin limbi rarius desunt. Flores ad apices ramorum v. rarius in axillis summis spicati v. subracemosi, ♂ sæpius secus rhachin fasciculati pedicellati v. subsessiles, ♀ sessiles, in parte inferiore spicæ sub quaque bractea absque maribus, v. rarius in mediis fasciculis solitarii. Bracteæ parvæ, v. rarius sub fl. ♀ parum auctæ.

Species editæ ad 500, per regiones calidiores utriusque orbis latissime dispersæ, in America extratropica tam australi quam boreali paucæ, in Europa et Asia extratropica desunt. *Baill. Etud. Euph.* 349, *et Adansonia* i. 146, iv. 289. *Muell. Arg. in DC. Prod.* xv. ii. 513, *et in Mart. Fl. Bras.* xi. ii. 83. *Kurz, For. Fl. Brit. Burm.* ii. 371.

Genus in ordine post *Euphorbiam* vastissimum, *Phyllantho* numerosius, sed characteribus essentialibus minus variat, et sat definite limitatur. Habitu valde polymorphum est, sed vix adhuc in sectiones idoneas ab auctoribus divlditur. Klotzsch in variis commentationibus genera ultra 20 separavit, sed pleraque, ad species unicas definita, a botanicis recentioribus haud adoptantur et auctor nunquam totius generis revisionem edidit. Baillon ll. cc. sectiones 22, plerasque sat naturales proposuit, sed conspectus comparativus nobis deest, et species plurimæ postea editæ ægre includuntur. Mueller Argoviensis sectiones 10 admisit, stricto sensu artificiales et quam maxime inæquales. Divisiones ergo sequentes, in Prodromo propositæ in Flora Brasiliensi ulterius elaboratæ clavem exhibent artificialem sed nequaquam sectiones naturales existimandæ:—

1. *Eluteria*, species continet 25, Americanas, Africanas et Mascarenses, petalis fl. ♀ plus minus evolutis, calyce ♂ 5-mero sæpissime valvato. *Muell. Arg. in Mart. Fl. Bras.* xi. ii. *t.* 14, *f.* 1. *Kl. in Hayne, Arzneig.* xiv. *t.* 1, 2. *Benn. in Pharm. Journ. ser.* 2, iv. 145, *cum ic.* Cascarilla, *Adans. Fam.* ii. 355. Species plurimæ indumento lepidoto sæpe metallico vestitæ sunt, staminibus infra 20; Americanæ petalis fl. ♀ sæpius parvis, in sectione *Argyroglosso*, Baill., Africanæ v. Mascarenses, petalis fl. ♀ sæpius magis evolutis, in sectionibus *Furcaria*, *Monguia* et *Andrichnia*, Baill., includuntur. Klotzschiphytum, *Baill. Etud. Euph.* 382, est species Mauritiana a Muell. Arg. in *Eluteria* inclusa, sed habitu et staminibus valde numerosis insignis et subsectioni *Cyclostigmati Eucrotonis* multo affinior. Sectio *Eucroton*, Baill. Etud. Euph. 354, characteres offert *Eluteriæ*, sed de speciebus quas sub illa includit silet auctor.

2. *Decapetalon*, species 3 continet, unam Chinensem, alteram Madagascarensem, tertiam Brasiliensem, ab *Eucrotone* distinctas glandulis fl. ♂ (seu potius calycis squamis) inter petala auctis plus minus petaloideis. Specimina non vidimus sed ex descriptione tam habitu quam patria differunt. Species Chinensis, *C. lævigatus*, Vahl, evidenter *Tigliis* approximanda est; Madagascariensis, *C. squami-*

gerus, Baill., ad sectionem suam *Furcariam* pertinet; Brasiliensis, *C. exuberans*, Muell. Arg. in Mart. Fl. Bras. xi. ii. 85, *t.* 15, potius ad *Palamostigma* referenda est.

3. *Decalobus*, in Prodromo definitur ad speciem Guatemalensem nostro sensu tam habitu quam characteribus ad *Julocrotonem* referendam. Lobi accessorii calycis ♀ non sunt lobis primariis regulariter alterni, sed appendices ad basin loborum solitariæ v. 2–3-næ ut in nonnullis aliis speciebus *Julocrotonis* observantur. Huic addidit Muell. Arg. in Mart. Fl. Bras. xi. ii. 86, *t.* 16, speciem alteram a nobis non visam, sed ex icone a priori longe dissimilis est et cum *Eucrotonis* subsectione convenit excepto calyce ♀ inæqualiter irregulariterque 6–10-lobo.

4. *Eucroton*, qualis a Muell. Arg. intelligitur, maximam partem generis includit, ultra 400 species utriusque orbis quibus petala in fl. ♂ evoluta, in fl. ♀ minuta rudimentaria v. 0, calycis segmenta subæqualia et receptaculum fl. ♂ villosum. Sectio quoad habitum cæterosque characteres uti totum genus polymorphum, naturalior evadit si excludas species indumento lepidoto vestitas illasque sub sectionibus *Timandra* (cum *Medea*), *Podostachys*, *Cleodora*, *Cyclostigma*, *Stolidanthus*, *Ocalea* descriptas paucasque alias. Muell. Arg. cæterum sectionem in subsectiones 5 dividit sequentes:—

Subsect. 1. *Eutropia*. Frutices sæpius elati, racemis elongatis, bracteis infimis flores ♀ cum fasciculo marium proferentibus. Species utriusque orbis, pro maxima parte tamen Americanæ, a Muell. Arg. in series 2 distribuuntur secus indumentum lepidotum v. non lepidotum. Series prior *Muell. Arg. in Mart. Fl. Bras.* xi. ii. 87, *t.* 17, inclusa EUTROPIA, *Klotzsch in Wiegm. Archiv.* vii. 196, ab *Argyroglosso* imprimis inflorescentia distinguitur et bene sectionem propriam constituit. Folia sæpe pellucido-punctata. Stamina infra 20. Series altera, *Cyclostigma*, Muell. Arg. in Mart. Fl. Bras. xi. ii. 91, t. 18 ad 22, indumento non lepidoto molliter v. minute stellato-piloso, staminibus nunc numerosissimis nunc infra 20, in sectiones duas dividi potest: (1) PALAMOSTIGMA, *Mart. ex Klotzsch in Hook. Lond. Journ.* ii. 49 (CYCLOSTIGMA, *Klotzsch in Seem. Bot. Her.* 104) foliis palminerviis; et (2) *Stolidanthus*, Baill., foliis penniveniis.

Subsect. 2. *Lasiogyne*, Muell. Arg. in Mart. Fl. Bras. xi. ii. 117, *t.* 23 ad 25, definitur bracteis racemi unisexualibus inferioribus ♀, superioribus ♂, et calycis ♀ segmentis reduplicativis (hoc charactere nobis vix obvio). In series 2 inter se sat dissimiles dividitur: *Argyroglossum* indumento lepidoto, et *Gonocladium* indumento non lepidoto. Prior cum speciebus pluribus *Eluteriæ* et *Argyrocrotonis*, Muell. Arg., sectionem Americanam *Argyroglossum*, Baill., constituunt, et includit *C. Matourensem*, Aubl. Pl. Gui. t. 338. Series altera polymorpha est; *Gonocladium*, Baill., continet species a *Stolidantho* imprimis inflorescentia distinctas et includit LASIOGYNEM, *Klotzsch in Pl. Meyen.* 418, et CLEODORAM, *Klotzsch in Wiegm. Archiv.* vii. 196, ab auctore disci glandularum absentia definitam. Glandulas describunt Baillon et Mueller, quas ad basin calycis v. interdum altius sparsas invenimus nec receptaculo affixas. His speciebus addidit Muell. Arg. plurimas australes extratropicas parvifolias habitu longe diversas, a Klotzschio et Baillono in *Henderandro* v. *Codonocalyce*, dispersas. *C. Gardnerianus*, Baill., ex 'Ceara, Gardner n. 944, in herb. Deless.' a Baillono in *Gonocladio*, a Muell. Arg. in *Decarinio*, collocatus, nobis ignotus est. Plantam inter Gardnerianas haud agnovimus, et evidenter sphalma in herbario Delessert latet, nam n. 944 collectionis Gardneri est *Galphimia brasiliensis*, A. Juss.

Subsect. 3. *Cleodora*, Muell. Arg. in Mart. Fl. Bras. xi. ii. 133, *t.* 26 ad 32, non Klotzsch, bracteis ut in *Lasiogyne* unisexualibus, inferioribus ♀ superioribus ♂, distinguitur calycis ♀ segmentis non reduplicativis imbricatis v. subvalvatis. Pariter in series 2 dividitur: *Argyrocroton* indumento lepidoto, et *Medea* indumento non lepidoto. Species pleræque *Argyrocrotonis Argyroglosso* multo affiniores sunt quam speciebus plerisque *Medeæ*. *C. constrictus*, Baill., tamen omnino eadem videtur ac *C. Gardneri*, Muell. Arg., numero Gardneri in schedula herbarii Delessert inscripto verisimiliter errore scriptoris, 3428 pro 3438; n. 3428 verum collectionis Gardnerianæ est *Dorstenia Cayapia*, Vell. var. Series 2, *Medea*, est agmen specierum ultra 150 vinculo artificiali nec affinitate naturali junctarum, et comprehendit genera 6 sequentia a Klotzschio proposita:—

a. TIMANDRA, *Klotzsch in Wiegm. Archiv.* vii. 197. Fruticuli ramosissimi parviflori Brasilienses, indumento stellato scabro haud copioso, inflorescentiis in axillis superioribus sessilibus brevissimis fere occultis, calycibus ex Klotzschio constanter sed certe casu tantum 4-meris, staminibus paucis. Species paucæ sunt, sed cum MEDEA, *Klotzsch in Wiegm. Archiv.* vii. 198, floribus 5-meris ab auctore distincta, sectionem naturalem formant ab *Eucrotone* facile separandam.

b. OCALIA, *Klotzsch in Wiegm. Archiv.* vii. 195, species continet paucas Brasilienses, caulibus e basi sublignosi herbaceis erectis parum ramosis, indumento stellato-hispido, calyce ♀ ex auctore inæquali, quod vix in speciminibus nostris apparet. Caterva habitu bene distincta. *St. Hil. Pl. Us. Bras. t.* 59.

c. TIGLIUM, *Klotzsch in Pl. Meyen.* 418, *et in Hayne, Arzneig.* xiv. *t.* 3, frutices continet Asiaticas indumento stellato parco v. subnullo, cæterum ab *Eucrotonibus* typicis calycis segmentis imbricatis nequaquam separandos. Klotzsch in Hayne l. c. sub n. 3, in nota a Muell. Arg. incaute prætervisa, species 4 novas ex ins. Philippinarum edidit, quas in Prodromo sub aliis nominibus invenimus, scil.: *Tiglium Cumingii*, Kl., est *Croton leiophyllus*, Muell. Arg.; *T. subincanum*, Kl., est *C. consanguineum*, Muell. Arg.; *T. lanceolatum*, Kl., est *C. Verreauxii*, Baill. var.; et *T. pubescens*, Kl., est *C. luzoniensis*, Muell. Arg.

BARHAMIA, *Klotzsch in Seem. Bot. Her.* 104, suffrutices continet v. frutices Americanos, habitu *Astræis* integrifoliis accedentes, sed charactere nullo certo ab *Eucrotonibus* typicis distinguendos. CROTONANTHUS, *Klotzsch in Linnæa*, xxvi. 634 (absque charactere) est *C. rhamnifolius*, H. B. K., species fruticosa pariter ad *Eucrotonem* pertinens. MYRIOGOMPHUS, *Didrichs. in Vidensk. Meddel. Nat. For. Kjöbenh.* 1857, 142, est *C. fuscus*, Muell. Arg., species Brasiliensis, inflorescentia densa, calycibus glandulis numerosis longe stipitatis instructis, *Julocrotoni* accedens, et cum *C. vestito* aliisque paucis genus LEUCADENIUM, Kl., in herb. plur. format, quod tamen vix pro sectione propria ab *Eucrotone* distinguendum.

CODONOCALYX, *Klotzsch in Baill. Etud. Euph.* 369, species continet humiles Americanas, dense tomentosas, dioicas, habitu *Hendecandræ* similes, sed petala fl. ♂ evoluta.

Subsect. 4. *Podostachys*; species paucas Americanas includit, divisionem sat naturalem ad *Decarinium* accedentem formantes. Herbæ sunt duriusculæ v. suffrutices ramosi, indumento stellato-hirto, racemis intra folia ultima sessilibus, floribus ♀ ad basin capitato-confertis, parte superiore ♂ tenui a floribus ♀ intervallo nudo separata. *Muell. Arg. in Mart. Fl. Bras.* xi. ii. 225, *t.* 33. PODOSTACHYS, *Klotzsch in Wiegm. Archiv.* vii. 193. *C. subferruginea*, Muell. Arg., inflorescentia minus definita et habitu toto, potius *Eucrotoni* nostro sensu limitato transferenda videtur.

5. *Astræa.* Species paucæ Americanæ, quarum una in orbe vetere si inquilina jam late dispersa. Caules e basi v. superne herbacei, indumento stellato. Folia sæpe nec constanter palmatim 3–5-loba. Flores *Eucrotonis* sed receptaculum fl. ♂ fide Muell. Arg. constanter glabrum. *Muell. Arg. in Mart. Fl. Bras.* xi. ii. 233, *t.* 34. *Vell. Fl. Flum. Ic.* x. *t.* 70, 71. *Beauv. Fl. Ow. et Ben. t.* 36. ASTRÆA, *Klotzsch in Wiegm. Archiv.* vii. 194. *Wawra in Pr. Maxim. Reise, Bot. t.* 42.

6. *Quadrilobus.* Est species unica Brasiliensis, a nobis non visa, nec in iconibus depicta, ab *Eucrotone* distincta dicitur, calyce floris ♂ 4-mero (in fl. ♀ 4–5-mero); character minimi valoris, nam flores 4-meri hinc inde observantur in paucis speciebus sectionum diversarum.

7. *Decarinium.* Species Americanæ 42, habitu polymorphæ, ab *Eucrotone* distinctæ calycis ♀ lobis plus minus inæqualibus, lobis 2 majoribus quinto minore nunc minuto v. 0, character sæpe valde incertus et proportio loborum in eadem specie sæpe variabilis. Uti aliæ sectiones majores in series 2 dividitur: *Lamprocroton* indumento lepidoto, *Muell. Arg. in Mart. Fl. Bras.* xi. ii. 244, *t.* 35, 36; et *Geiseleria*, indumento non lepidoto, *Muell. Arg. l. c.* 255, *t.* 37, 38. *L'Hér. Stirp. Nov. t.* 9. *Jacq. Ic. Rar. t.* 194. Priorum species plures includuntur in sect. *Argyroglossum*. Inter *Non-lepidotas* plures fruticosæ dense tomentosæ v. lanatæ calycibus ♀ parum inæqualibus melius cum similibus inter *Eucrotones* associantur; aliæ caule herbaceo v. suffrutescente, indumento stellato-hispido, foliis serratis, spicis brevibus, calyce ♀ magis inæquali habitum peculiarem proferunt, et includunt *C. glandulosum*, Linn., cum paucis affinibus, seu genus DECARINIUM, *Rafin. Neogenyt.* 1 (GEISELERIA, *Klotzsch in Wiegm. Archiv.* vii. 254. BRACHYSTACHYS, *Klotzsch in Hook. Lond. Journ.* ii. 47). Klotzsch *Geiseleriam* a *Brachystachye* distinxit calyce ♀ 4-mero nec 5-mero, segmentum quintum tamen in eadem specie nunc cæteris fere æquale nunc minutum vix conspicuum et facile prætervisum, et Muell. Arg. genera duo Klotzschyana varietates unius speciei nuncupat.

8. *Heptallon.* Species 3 boreali-Americanæ, herbaceæ, stellato-lanatæ v. tomentosæ, habitu fere *Julocrotonis*, floribus intra folia summa subcapitatis, calyce ♀ ∞- (sæpius 7–8-)partito subvalvato. HEPTALLON, *Rafin. Neogenyt.* 1 (PILINOPHYTUM, *Klotzsch in Wiegm. Archiv.* vii. 255).

9. *Angelandra.* Species 2, boreali-Americanæ, annuæ, dioicæ, ramosæ, habitu *Hendecandræ* affines, indumento tenui stellato-lepidoto, racemis brevissimis laxis, calyce ♂ inæquali, ♀ subæquali. ENGELMANNIA, *Klotzsch in Wiegm. Archiv.* vii. 253, *non Torr. et Gr.* (ANGELANDRA, *Endl. Gen. Suppl.* iv. iii. 91. GYNAMBLOSIS, *Torr. in Rep. Marcy Exped.* 295).

10. *Drepadenium* (melius *Hendecandra*). Species 7, herbaceæ v. suffruticosæ, Americæ borealis v. centralis, dioicæ, ramosæ, sæpius humiles, indumento lepidoto v. substellato incano, racemis brevissimis laxis, calyce in utroque sexu æquali. Petala etiam in maribus 0, dum in cæteris sectionibus in fl. ♂ adsunt. Stamina sæpius 10–11. *Cav. Ic. t.* 6. HENDECANDRA, *Eschsch. in Mem. Acad. Petersb.* 1823 (edit. 1826?), 287. *Hook. et Arn. Bot. Beech. t.* 91. DREPADENIUM, *Rafin. Neogenyt.*

2. Astrogyne, *Benth. Pl. Hartw.* 14. His addidit Muell. Arg. in Mart. Fl. Bras. xi. ii. 272, *t.* 39, speciem brasiliensem arboream macrophyllam monoicam grandifoliam, a nobis non visam; ex icone et descr. ab *Hendecandris* boreali-americanas longe distat habitu et characteribus omnibus præter absentiam petalorum in fl. ♂, qua non obstante multo melius *Gonocladiis* Baill. associanda.

Argyrodendron, *Klotzsch in Peters, Mossamb. Bot.* 100, *et ex Muell. Arg. in DC. Prod.* xv. ii. 700, genus spurium e speciebus 2 fictum, altera ad *Crotonem* (*Eutropiam*), altera ad *Combretum* referenda.

Thidesmis, *Lour. Fl. Cochinch.* 576, species 2 continet, Chinenses prope Cantonem lectas, ex charactere dato verisimiliter ad *Crotonem* referendas, uti proponit Muell Arg.

85. **Julocroton**, *Mart. Herb. Fl. Bras.* 119. (Heterochlamys, *Turcz. in Bull. Soc. Imp. Nat. Mosc.* 1843, 61. Centrandra, *Karst. Fl. Colomb.* i. 177, *t.* 88.)—Flores monoici, sæpius petaliferi. Fl. ♂: Calyx alte 5-lobus, sæpius inæqualis, lobis majoribus interdum basi v. dorso varie appendiculatis. Petala angusta v. parva. Disci glandulæ nunc staminibus exterioribus nunc petalis alternæ. Stamina 10–11, receptaculo piloso affixa, uno sæpe centrali, filamentis liberis apice in alabastro inflexis per anthesin erectis; antheræ subanthesi erectæ, adnatæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx maris, glandulis tamen v. appendiculis sæpe magis conspicuis. Petala parva minuta v. 0. Discus hypogynus dimidiatus, antrorsum reniformis, integer v. 3-lobus v. e glandulis 3 distinctis, rarius annularis et 5-lobus. Ovarium 3-loculare; styli patentes, liberi v. basi breviter connati, semel v. bis bifidi; ovula in loculis solitaria. Capsula in coccos 2-valves dissiliens. Semina strophiolata, testa crustacea; albumen copiosum; embryo rectus, cotyledonibus planis latis.—Frutices suffruticesve tomento stellato sæpe denso mollique vestiti. Folia alterna, integerrima v. denticulata, basi 3–5-nervia. Flores in spicam densam terminalem sæpius cylindraceam intra folia summa sessilem conferti, inferiores ♀, superiores ♂, omnes sessiles v. præsertim ♂ breviter pedicellati. Bracteæ nunc lineari-setaceæ nunc lacero-dissectæ et calycis ♀ lobi majores sæpe lacero-dissecti.

Species descriptæ 20, Americæ tropicæ v. subtropicæ a Brasilia meridionali usque ad Mexicum incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 701, *et in Mart. Fl. Bras.* xi. ii. 275, *t.* 40, 41. *Vell. Fl. Flum. Ic.* x. *t.* 65, 66 (*Croton*).

Genus *Crotoni* valde affine et facile pro sectione illi restituendum. Inflorescentia tamen et sæpe calyx ♀ satis distincti videntur. Baillon et Muell. Arg. situm calycis segmentis quinti axin versus posticum dicunt in *Crotone*, anticum in *Julocrotone*, character nobis valde dubius, nec in speciminibus siccis verificandus, positio calycis in floribus dense glomeratis necessarie variabilis evadit.

Julocroton a Didrichs. in Vidensk. Meddel. Nat. For. Kjöbenh. 1857, 129 in subgenera 2 dividitur, habitu inter se parum diversa: *Eremadenia* floris ♀ disco hypogyno e glandula integra antrorsum reniformi constante, et *Oligonychia* disco antrorsum 3-lobo v. e glandulis 3 sepalis exterioribus basi adnatis composito. In *J. Riedeliano*, Muell. Arg., a nobis non viso, discus floris ♀ æqualiter 5-lobus dicitur. In *Crotone decalobo*, Muell. Arg., qui nobis potius *Julocrotonis* species videtur, discus vix prominens squamellis 5 brevissimis latis sepalorum basibus affixis, 3 exterioribus paullo magis prominulis.

86. **Crotonopsis**, *Mich. Fl. Bor. Amer.* ii. 185, *t.* 46. (Friesia, *Spreng. Syst.* iii. 760. Leptemon, *Rafin. ex Endl. Gen.* 1117.)—Flores monoici, sæpe petaliferi. Fl. ♂: Calycis segmenta 5–3, imbricata. Petala totidem. Glandulæ ad basin calycis. Discus cæterum 0. Stamina in medio flore 4–5, filamentis liberis apice in alabastro inflexis demum erectis; antheræ sub anthesi erectæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx maris. Petala 0. Ovarium junius 2–3-loculare; styli breves, patentes, lobati; ovula in quoque loculo solitaria sed jam per anthesin unum solum in ovario perfectum. Capsula parva, indehiscens, abortu 1-locularis, 1-sperma, pericarpio membranaceo. Semen ovoideum, estrophiolatum, testa crustacea; albumen carnosum; embryo rectus, cotyledonibus ovatis planiusculis.—Herba annua, gracilis, dichotome v. subumbellatim ramosa, indumento lepidoto. Folia alterna v. opposita,

integerrima. Flores minuti, ad apices ramorum v. in dichotomiis superioribus breviter spicati, inferiores ♀, superiores ♂. Fructus minimi.

Species 1, Americæ borealis incola. *Muell. Arg. in DC. Prod.* xv. ii. 707.

87. **Eremocarpus,** *Benth. Bot. Sulph.* 53, *t.* 26.—Flores monoici, apetali. Discus 0. Fl. ♂: Sepala 5–6, imbricata. Stamina 6–7, receptaculo piloso affixa, filamentis liberis apice in alabastro inflexis demum erectis; antheræ sub anthesi erectæ, adnatæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Sepala uti petala desunt. Ovarium 1-loculare, in stylum longum filiformem indivisum desinens, stigmate ad apicem laterali; ovulum 1. Capsula ovoidea, monococca, 2-valvis, pericarpio chartaceo. Semen estrophiolatum, testa crustacea; albumen carnosum; embryo rectus, cotyledonibus latis planis.—Herba humilis, ramosissima, pilis stellatis undique dense setosa. Folia alterna v. sub ramis opposita v. subverticillata, integerrima, mollia, pennivenia. Flores parvi, ad apices ramorum v. in dichotomiis summis breviter spicati, sessiles v. brevissime pedicellati, inferiores ♀, superiores ♂.

Species 1, boreali-Americana. *Muell. Arg. in DC. Prod.* xv. ii. 708.

88. **Givotia,** *Griff. in Calc. Journ. Nat. Hist.* iv. 388. (Govania, *Wall. Cat. Herb. Ind. n.* 7851, *nomen.*)—Flores dioici, petaliferi. Discus margine integer v. sinuato-lobatus. Fl. ♂: Sepala 5, lata, inæqualia, valde imbricata. Petala 5, calyce sublongiora, in corollam urceolato-globosam 5-lobam diu cohærentia. Stamina ∞ (15–25), in receptaculo lanato-villoso conferta, filamentis liberis brevibus erectis; antheræ ovatæ, prope basin dorsifixæ, loculis distinctis parallelis longitudinaliter dehiscentibus connectivo angusto adnatis. Ovarii rudimentum 0. Fl. ♀: Perianthium maris nisi petala facilius solvenda mox libera. Ovarium 2–3-loculare; styli breves, patentes, 2-fidi; ovula in loculis solitaria. Drupa subglobosa, indehiscens, abortu 1-locularis 1-sperma, exocarpio crasso carnoso, endocarpio duro. Semen globosum, testa crassa ossea 'epidermate tenui'; albumen carnosum; cotyledones planæ, latæ.—Arbor parva, ramulis inflorescentia et foliorum pagina inferiore tomento denso albo stellato indutis. Folia alterna, ampla, late rotundato-cordata, acute sinuato-dentata, basi 5–9-nervia. Flores cymulosi, cymulis racemoso-paniculatis; paniculæ in axillis superioribus v. ad basin innovationum nunc (præsertim ♂) longis laxis, nunc (præsertim ♀) abbreviatis densis v. paucifloris.

Species 1, Indiæ orientalis peninsulæ et Zeylaniæ incola. *Muell. Arg. in DC. Prod.* xv. ii. 1112. *Wight, Ic. t.* 1889.

89. **Ricinodendron,** *Muell. Arg. in Flora,* 1864, 533, *et in DC. Prod.* xv. ii. 1111.—Flores dioici, petaliferi. Fl. ♂: Calyx subglobosus, segmentis 5 latis imbricatis inæqualibus. Petala in corollam globosam apice imbricato-5-lobam cohærentia. Disci glandulæ 5, distinctæ, magnæ, ovatæ, crassæ, erectæ, stamina cingentes. Stamina ∞, receptaculo intra glandulas affixa, filamentis filiformibus liberis basi lanato-villosis apice inflexis; antheræ oblongæ, dorsifixæ, versatiles, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀ (a nobis non visi): Discus hypogynus crassus, integer lobatusve. Ovarium 3-loculare; styli 2-fidi, petaloidei; ovula in loculis solitaria (*Baill.*). Fructus indehiscens, exocarpio carnoso, endocarpio osseo lignoso. Semina estrophiolata; albumen carnosum; cotyledones planæ, latæ (*Muell. Arg.*).—Arbor, ramulis crassiusculis. Folia alterna, longe petiolata, ampla, digitata, segmentis sæpius 5 acuminatis membranaceis penniveniis basi contractis. Stipulæ latæ, reniformes, crenatæ v. laceræ. Flores ♂ parvi, dense cymulosi, cymulis in panicula terminali longa laxa pyramidata racemoso-ramosa numerosis. Calyx tomentosus. Corolla glaberrima vix exserta.

Species 1, Africæ tropicæ incola, ab auctore prius ex floribus fœmineis, habitu et inflorescentia neglectis, in *Jatropha* collocata. *Benth. in Hook. Ic. Pl. t.* 1300.

90. **Manniophyton,** *Muell. Arg. in Flora* 1864, 530, *et in DC. Prod.* xv. ii. 719.—Flores dioici, petaliferi. Fl. ♂: Calyx in alabastro globosus, clausus, per anthesin irregulariter valvatim ruptus. Petala in urceolum latum breviter sinuato-lobatum coalita. Glandulæ 5, pilosæ, staminibus exterioribus petalisque alternæ. Stamina ∞ (12–20), receptaculo

convexo piloso affixa, filamentis liberis; antheræ erectæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx brevis, alte 3-fidus, lobis valvatis mox apertis. Petala 5, libera, valde imbricata, calyce longiora. Discus vix prominens, pilosus. Ovarium rigide pilosum, 3-loculare; styli 2-partiti, ramis patentibus linearibus crassis; ovula in loculis solitaria. Capsula majuscula, profunde tridyma, in coccos 2-valves dissiliens, endocarpio crasso duro. Semina nitida, testa crustacea; albumen carnosum? embryo . . .—Frutices scandentes, indumento ferrugineo-hispido simplici v. substellato. Folia alterna, longe petiolata, lata, integerrima v. 3–5-loba, basi 5–7-nervia penninervia et transversim venulosa. Paniculæ racemiformes, longæ, parum ramosæ v. subsimplices, axillares, floribus ♂ secus ramulos sessilibus v. brevissime pedicellatis parvulis glomeratis, ♀ paullo majoribus sparsis longius pedicellatis.

Species (v. unius varietates?) 3, Africæ tropicæ incolæ. *Benth. in Hook. Ic. Pl. t.* 1267, 1268.

91. **Pausandra,** *Radlkof. in Flora,* 1870, 92, *t.* 2.—Flores dioici?, petaliferi. Fl. ♂: Calyx campanulatus, brevis, sinuato-5–6-lobus. Petala in corollam 5–6-lobam basi connata, lobis contorto-imbricatis basi ad faucem transversim barbatis. Discus cupularis, truncatus, staminum basin cingens. Stamina intra discum 5–7, si lobis calycinis isomera iis alterna, filamentis liberis erectis; antheræ erectæ, oblongæ, loculis connectivo latiusculo adnatis parallelis subintrorsum longitudinaliter dehiscentibus. Ovarii rudimentum minutum. Fl. ♀: . . . Capsula tridyma, lævis, in coccos 2-valves dissiliens, endocarpio duriusculo. Semina ovoidea, compressiuscula, testa crustacea nitida; albumen carnosum; cotyledones planæ, latæ.—Arbuscula glabra, v. pilis malpighiaceis stellatisve conspersa. Folia alterna, magna, breviter petiolata, dentata, penninervia. Flores ♂ parvi, in racemos axillares simplices v. paniculato-ramosos dispositi, secus rhachin tomentellam fasciculati v. sparsi, brevissime pedicellati. Capsulæ in specimine unico fructifero secus rhachin racemi brevis paucæ.

Species 1, in America tropica a Brasilia usque ad Nicaraguam extensa. *Muell. Arg. in Mart. Fl. Bras.* xi. ii. 503, *t.* 99.

92. **Trigonostemon,** *Blume, Bijdr.* 600 (*lapsu* Trigostemon).—Flores monoici, petaliferi. Fl. ♂: Sepala 5, imbricata. Petala 5, calyce longiora. Disci glandulæ 5. Stamina 3 v. 5, filamentis in columnam brevem connatis; antheræ ad apicem columnæ sessiles, erectæ v. horizontales, loculis extrorsum connectivo crasso adnatis distinctis parallelis divergentibus v. divaricatis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx et sepala maris. Discus sæpius integer. Ovarium 3-loculare; styli distincti v. basi breviter connati, breviter v. alte 2-fidi; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves dissiliens, endocarpio crustaceo. Semina ovoidea v. subglobosa, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Arbores fruticesve. Folia alterna, petiolata v. fere sessilia, interdum ampla, integerrima, penninervia. Racemi axillares v. rarius terminales, elongati v. abbreviati, interdum ad cymam unicam subsessilem reducti. Flores parvi, sæpius pedicellati, ♂ secus rhachin fasciculati v. subcymosi, ♀ solitarii v. in cymulis ♂ singuli.

Species ad 10, Indiæ orientalis et Archipelagi Malayani incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1105 (*sect.* 5 *ad* 7). *Baill. Etud. Euph. t.* 11.

Inter sectiones a Muellero distinctas, *Dimorphocalyx* ad genus proprium restituendus videtur. *Cheilosinopsis* omnino *Ostodi* convenit, *T. zeylanicus*, Muell. Arg., est ipsissima *Ostodes minor*, Muell. Arg., *Tritaxis* cum *Antitaxi* pro genere proprio inter *Jatropheas* servanda. *T. lævigatus*, Muell. Arg., nobis vix *Trigonostemonibus* typicis congener videtur. Collocatur in sectione *Silvæa* floribus ♀ apetalis, sed in flore examinato certe petala calyce vix breviora invenimus. A speciebus typicis differt inflorescentia *trichotoma*, cymis sessilibus oppositifoliis, et antheris intra discum cyathiformem subsessilibus distinctis nec in columna elevatis. Verisimiliter genus proprium format, sed adhuc fructu ignoto haud tute definiendum. Cæteræ species in sectiones 3 distribuendæ:—1. *Eutrigonostemon*, racemis axillaribus, antheris 3 in columna brevi erectis distinctis apice plus minus 2-fidis. *Wight, Ic. t.* 1890. Sect. *Silvæa* et *Eutrigonostemonis* § 2, Muell. Arg. SILVÆA, *Hook. et Arn. Bot. Beech.* 211. ATHROISMA, *Griff. Notul.* iv. 477. 2. *Telogyne*, Muell. Arg., inflorescentia et antheris

Eutrigonostemonis sed numero 5. Telogyne, *Baill. Etud. Euph.* 327. 3. *Pycnanthera*, racemis terminalibus antheris 3 ad apicem columnæ brevis sessilibus, loculis connectivum crassum marginantibus. Huc pertinent species 2 Zeylanicæ, *T. diplopetalus*, Thw., antherarum loculis divaricatis transversis, et *T. nemoralis*, Muell. Arg., Bedd. Ic. Pl. Ind. Or. t. 182, antherarum loculis radiantibus.

Tylosepalum, *Kurz ex Teijsm. et Binnend. in Batav. Natuurk. Tijdschr.* xxvi. 50, a Muell. Arg. pro sectione *Codiæi* receptum, nobis characteres potius *Trigonostemonis* ostendere videtur. Specimen nostrum imperfectum. Inflorescentia ut in *Eutrigonostemone* axillaris, sed flores ♂ fasciculati ♀ racemosi dicuntur. Calyx differt segmentis extus basi glandula disciformi notatis. Cætera florum tam ♂ quam ♀ omnino *Eutrigonostemonis*.

93. **Paracroton,** *Miq. Fl. Ind. Bat.* i. ii. 382. — Flores monoici, petaliferi. Fl. ♂ : Sepala 5, imbricata. Petala totidem. Disci glandulæ petalis alternæ. Stamina ∞ (15–20), filamentis centralibus monadelphis ; antheræ extrorsum 2-rimosæ. Fl. ♀ : Ovarium 3-gono-pyramidatum, 3-loculare ; styli distincti, 2-fidi ; ovula in loculis solitaria. Capsula crassa, lignosa, in coccos 3-valves dissiliens. Semina latiora quam longa, glabra ; albumen copiosum ; cotyledones latæ, planæ.—Arbor mediocris. Folia alterna, petiolata, lanceolata, repando-serrata, basi 2-glandulosa. Racemi terminales, 3–4-pedales, penduli, pedicellis alternatim fasciculatis. (*Char. ex Miq.*)

Species 1, Javanica, a nobis non visa. *Miq. in DC. Prod.* xv. ii. 1112. Genus ex charactere dato quoad inflorescentiam et semina latiora quam longa *Galeariæ* convenit, sed staminibus ∞ centralibus aliisque notis abunde differt.

94. **Ostodes,** *Blume, Bijdr.* 619. (Desmostemon, *Thw. Enum. Pl. Zeyl.* 278.)—Flores monoici v. dioici, petaliferi. Fl. ♂ : Calyx 5-partitus, segmentis latis inæqualibus imbricatis. Petala 5, calyce longiora. Disci glandulæ 5. Stamina ∞ (15–30), receptaculo convexo v. columnari affixa, filamentis firmis v. tenuibus ; antheræ juxta basin dorsifixæ, loculis parallelis v. divergentibus connectivo latiusculo adnatis introrsum longitudinaliter dehiscentibus, staminum 2–3 terminalium sæpius horizontales. Ovarii rudimentum 0. Fl. ♀ : Perianthium maris. Ovarium 3-loculare ; styli breves, patentes, 2-partiti ; ovula in loculis solitaria. Capsula subglobosa, 6-costata, pericarpio duro, endocarpio fere osseo, demum in coccos 2-valves dissiliens. Semina ovoidea, testa crustacea (extus in vivo pulposa?) ; albumen carnosum ; cotyledones planæ, latæ. — Arbores fruticesve. Folia alterna, ampla, pennivenia, dentata v. rarius integerrima. Racemi laxi, ad apices ramorum paniculati, sæpe elongati, v. infra folia laterales brevioresque. Flores ♂ secus rhachin v. ramos laxe cymulosi, ♀ in racemo distincti secus rhachin sigillatim sparsi v. rarius in cymulis ♂ solitarii.

Species ad 6, Indiæ Orientalis et Archipelagi Malayani incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1114. *Bedd. in Trans. Linn. Soc.* xxv. *t.* 27, *in Fl. Sylv. t.* 274, *repetita.*

O. Helferi, Muell. Arg., sectionem *Geloniastrum* formans, floribus ♂ ad axillas fasciculatis, antheris extrorsum 2-rimosis et petalis pubescentibus nobis ignota est, et forte e genere excludenda. Speciebus Prodromi addendæ sunt, præter *Trigonostemonem zeylanicum*, Muell. Arg. ad *O. minorem*, Muell. Arg., referendum, *Trigonostemon macrophyllus*, Muell. Arg., et probabiliter Fahrenheitia, *Reichb. et Zoll. in Linnæa* xxviii. 600, ex ins. Baki, nobis non nisi charactere dato notas.

95. **Codiæum,** *Rumph.* ; *A. Juss. Euph. Tent.* 33, *t.* 9. (Phyllaurea, *Lour. Fl. Cochinch.* 575.)—Flores monoici, saltem ♂ petaliferi. Fl. ♂ : Calyx membranaceus, lobis segmentisve 3–6 sæpius 5, imbricatis. Petala 5–6, parva. Disci glandulæ petalis alternæ. Stamina ∞ (15–30), receptaculo parum elevato affixa, filamentis liberis ; antheræ erectæ, loculis connectivum latiusculum marginantibus longitudinaliter dehiscentibus et apice demum confluentibus. Ovarii rudimentum 0. Fl. ♀ : Calycis parvi lobi 5, appressi. Petala 0. Discus subinteger. Ovarium 3-loculare ; styli distincti v. vix basi connati, patentes v. recurvi, longe subulati, indivisi ; ovula in loculis solitaria. Capsula globosa, in coccos 2-valves dissiliens, endocarpio pergameno. Semina (an semper?) strophiolata, testa nitidula crustacea ; albumen carnosum ; cotyledones planæ, latæ.—Arbores fruticesve glabri. Folia alterna, petiolata, integerrima, coriacea, pennivenia. Racemi elongati, in axillis superioribus solitarii, sæpius unisexuales v. rarius flos ♀ unus alterve in racemo ♂ ; flores ♂ parvi sub quaque bractea sæpius glomerati, ♀ solitarii.

Species distinguendæ forte 4, insularum maris Pacifici australis, Australiæ et Archipelagi Malayani incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1119 (sect. *Eucodiæum* et *Synaspisma*). *Bot. Mag. t.* 3051. *Lodd. Bot. Cab. t.* 870. Species typica, ob folia variegata diu in hortis culta, in diariis hortulanorum sub variis nominibus frequenter delineatur.

Codiæum quale in Prodromo definitum stirpes plures nostro sensu heterogeneas includit, et ad sectiones supra citatas reducendum videtur. *Blachiam* et *Baloghiam* pro generibus propriis retinemus, et *Tylosepalum* ad *Trigonostemonem* referrimus.

SYNASPISMA, *Endl. Gen.* 1110, est *C. inophyllum*, Muell. Arg. (*Crozophora peltata*, Labill. Sert. Austr. Caled. t. 75), ab *Eucodiæo* pro sectione distinctum ob calycis segmenta pauciora et racemum ♂ amentiformem. Racemi ♂ etiam in *C. variegato* prima juventute amentiformes sunt, sed in *C. inophyllo* multo tardius elongantur, et bracteæ peltatæ primum imbricatæ sunt.

JUNGHUHNIA, *Miq. Fl. Ind. Bat.* i. ii. 412, est ex Muell. Arg. specimen *Codiæi* floribus mutilatis.

96. **Baloghia,** *Endl. Prod. Fl. Norf.* 84 ; *Iconogr. t.* 122, 123.—Flores monoici (v. dioici ?) petaliferi. Discus margine undulato-lobatus v. e squamellis parvis petalis alternis v. obsoletus. Fl. ♂ : Calyx alte 4–6- sæpius 5-fidus, segmentis imbricatis per anthesin patentibus reflexisve. Petala totidem, calyce longiora. Stamina ∞ (10–100), receptaculo convexo v. conico affixa, v. filamentis plus minus in columnam connatis superne liberis crassiusculis exterioribus extrorsum nutantibus ; antheræ dorsifixæ, loculis distinctis parallelis extrorsum contiguis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀ : Perianthium maris. Ovarium 3-loculare ; styli distincti v. brevissime connati, patentes, alte 2-fidi, ramis simplicibus ∞-fidisve ; ovula in loculis solitaria. Capsula globosa, in coccos 2-valves dissiliens. Semina globosa v. oblonga, strophiola parva v. 0, testa crustacea ; albumen carnosum ; cotyledones planæ, latæ.—Arbores fruticesve glabri. Folia opposita v. alterna, breviter petiolata, coriacea, integerrima, tenuiter pennivenia. Racemi terminales breves, laxi, interdum ad fasciculum reducti, androgyni floribus inferioribus ♀, v. unisexuales. Flores utriusque sexus longiuscule pedicellati, sub bracteis parvis solitarii, quam in *Codiæo* multo majores.

Species ad 9, Novo-Caledonicæ, quarum una etiam in Australia invenitur. *Muell. Arg. in DC. Prod.* xv. ii. 1116 (*Codiæi* sect.). *Benth. Fl. Austral.* vi. 148 (excl. *B. Pancheri*).

In specie typica Endlicheri folia opposita, styli rami integri, et capsula crassa, 6-sulca, exocarpio crasso carnoso, endocarpio duro, tardius dehiscens. In speciebus a Baill. Adans. xi. 74 sub *Codiæi* sect. *Steigeria* enumeratis, quarum 3 examinavimus, folia alterna, styli rami sæpe laceri, capsula minor, tridyma, exocarpio parum carnoso, facile dissiliens. Omnes tamen bene congeneres videntur etsi nostro sensu a *Codiæo* longe distant habitu, inflorescentia, calyce, petalis, antheris et stylis. STEIGERIA, *Muell. Arg. in Linnæa*, xxxiv. 215, *et in DC. Prod.* xv. ii. 1121, speciem typicam staminibus 100 et ultra non vidimus, sed ex charactere dato bene a Baillono *Baloghiis* ceteris associatur.

97. **Alphandia,** *Baill. Adans.* xi. 85.—Flores monoici, petaliferi. Discus e glandulis liberis v. in annulum brevem connatis. Fl. ♂ : Calyx 5-dentatus, dentibus brevibus obtusis v. longiusculis dentatis valvatis. Petala 5, calyce longiora. Stamina ∞, receptaculo centrali conico inserta, filamentis liberis v. vix ima basi connatis ; antherarum loculi apice discreti, cruribusque brevissimis connectivi adnati, extrorsum rimosi. Fl. ♀ : Calyx brevis, 5-dentatus v. inæqualiter rumpendus. Petala crassiuscula, demum recurva. Ovarium 3-loculare ; styli breves, basi connati, crassi, 2-fidi, intus stigmatosi ; ovula in loculis solitaria. Capsula ubi nota majuscula in coccos dorso longitudinaliter carinatos dissiliens. Semina subteretia, lævia, strophiolata ; albumen copiosum ; cotyledones planæ, latæ.—Arbores parvæ v. frutices parce furfuracei v. resinoso-glandulosi. Folia alterna, petiolata, integerrima, pennivenia. Racemi longiusculi, terminales v. ad folia suprema axillares, simplices v. alterne cymiferi ; flores v. cymæ inferiores feminei, ceteri masculi superiores multo numerosiores. (*Char. ex Baill.*)

Species 2, Novo-Caledonicæ, a nobis non visæ. Ex charactere dato genus a *Baloghia* parum differt calyce dentato nec alte imbricato-lobato et floribus secus rhachin racemi sæpe cymulosis nec sub bractea solitariis.

98. **Fontainea,** *Heckel, Thèse, Montpellier,* 1870, *ex Baill. Adans.* xi. 80; *Hist. Pl.* v. 194.—Flores dioici, petaliferi. Fl. ♂: Calyx late cyathiformis, truncatus v. leviter sinuato-lobatus, demum sæpe fissus. Petala 5-6, calyce multo longiora, crassiuscula, puberula, leviter imbricata. Discus parum prominulus. Stamina ∞ (25–30), receptaculo conico affixa, filamentis liberis v. basi breviter connatis exterioribus apice extrorsum nutantibus; antherarum loculi distincti, extrorsum paralleli, sulco profundo longitudinali dehiscentes. Ovarii rudimentum 0. Fl. ♀ (a nobis non visi): Calyx valvatus inæqualiter ruptus. Petala maris. Discus continuus. Ovarium 3–6-loculare; styli crassiusculi, indivisi; ovula in loculis solitaria. Drupa suboliviformis, indehiscens, endocarpio osseo 2–6-loculare. Semen sæpius unicum perfectum, estrophiolatum; albumen copiosum; cotyledones planæ, latæ.—Frutex v. arbor parva, præter corollam glabra. Folia alterna, breviter petiolata, integerrima, coriacea, pennivenia, reticulata. Racemi in axillis summis breves fere fasciculiformes, floribus paucis longiuscule pedicellatis quam in *Codiæo* multo majoribus. (*Char. fl.* ♀ *et fr. ex Baill. l. c.*)

Species 1, Novæ Caledoniæ et Australiæ orientalis tropicæ incola, a *Muell. Arg. Prod.* xv. ii. 1117 dubie sub *Codiæo* inclusa, a *Baill. Adans.* ii. 214, quo docente a *Benth. Fl. Austral.* vi. 149 ad *Baloghiam* relata. Huic genere inflorescentia habitu et staminibus convenit, sed calyce et fructu bene distincta.

99. **Blachia,** *Baill. Etud. Euph.* 388, *t.* 19.—Flores monoici v. subdioici, saltem ♂ petaliferi. Fl. ♂: Calyx membranaceus, globosus, 4–5-partitus, segmentis imbricatis. Petala 4–5, parva. Disci glandulæ squamiformes, petalis alternæ iisque æquilongæ. Staminæ ∞ (10–20), receptaculo convexo affixa, filamentis liberis; antheræ ovatæ, loculis connectivum marginantibus et apice demum confluentibus. Ovarii rudimentum 0. Fl. ♀: Calycis segmenta lanceolata v. oblonga, post anthesin valde aucta, v. rarius parum aucta reflexaque v. caduca. Petala 0. Discus vix prominens. Ovarium 3–4-loculare; styli distincti, filiformes, 2-partiti; ovula in loculis solitaria. Capsula tridyma, calyce foliaceo v. reflexo sæpius stipata, in coccos 2-valves dissiliens, pericarpio haud crasso. Semina oblonga, estrophiolata, testa crustacea nitida; albumen carnosum; cotyledones planæ, latæ.—Frutices glabri, habitu potius *Dimorphocalycis* quam *Codiæi*. Folia alterna v. superiora subopposita, breviter petiolata, membranacea v. vix demum coriacea, integerrima, pennivenia. Racemi terminales, pedunculo gracili. Flores ♂ pedicellis filiformibus ad apicem pedunculi subumbellati v. breviter racemosi; ♀ nunc prope basin pedunculi ♂ solitarii v. fasciculati, nunc ad apices ramorum 2–3-ni absque fl. ♂; pedicelli superne incrassati.

Species 5 v. 6, pleræque Zeylaniæ v. Peninsulæ Indiæ orientalis incolæ, 1 Chinensis. *Benth. in Journ. Linn. Soc.* xvii. 226. *Muell. Arg. in DC. Prod.* xv. ii. 1118 (*Codiæi sect.*). *Wight, Ic. t.* 1874 (*Croton*). Genus certe quoad flores ♂ *Codiæo* accedit, sed habitu inflorescentia et floribus ♀ nobis abunde distinctum videtur.

100. **Dimorphocalyx,** *Thwaites, Enum. Pl. Zeyl.* 278.—Flores dioici (v. interdum monoici ?) petaliferi. Fl. ♂: Calyx cupulatus, margine undulatus, 5-dentatus v. breviter 5-lobus, apertus. Petala 5, calyce longiora. Disci glandulæ 5, petalis alternæ. Stamina ∞ (10–20), receptaculo elevato v. plus minus columnari imposita, 5 exteriora petalis opposita, filamentis liberis v. interioribus alte connatis; antheræ prope basin dorsifixæ, loculis parallelis v. divergentibus connectivo crassiusculo adnatis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx 5-partitus, segmentis imbricatis post anthesin valde auctis. Petala maris. Ovarium 3-loculare; styli basi connati, erecti, 2-fidi; ovula in loculis solitaria. Capsula 3-dyma, calycis segmentis valde auctis patentibus stipata, in coccos 2-valves dissiliens, endocarpio crustaceo. Semina ovoidea, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Arbores glabræ. Folia alterna, petiolata, integerrima, coriacea, pennivenia. Cymæ 2-pauci-floræ, axillares v. terminales, breviter v. longiuscule pedunculatæ.

Species (v. varietates insignes ?) 3 v. 4, Indiæ orientalis Peninsulæ, Zeylaniæ et Archipelagi

Malayani incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1105, ubi ad sectionem *Trigonostemonis* reducitur. *Bedd. in Trans. Linn. Soc.* xxv. *t.* 26, *icon in Fl. Sylv. t.* 273 *repetita sub Trigonostemone.* *Codiæum andamanicum*, Kurz, For. Fl. Brit. Burm. ii. 405, cujus specimina etiam accepimus a Malacca, *Griffith*, et Borneo, *Beccari n.* 2214 ♂, 2215 ♀ est *Dimorphocalycis* species.

101. **Sagotia,** *Baill. Adans.* i. 53.—Flores monoici, petaliferi. Discus 0. Fl. ♂: Sepala 5, lata, valde imbricata. Petala 5, longiora, imbricata. Stamina ∞ (ultra 20), in receptaculo ∞-seriatim conferta, filamentis brevissimis cum connectivo complanato lato erecto continuis; antherarum loculi erecti, discreti, paralleli, connectivum introrsum marginantes eoque breviores, longitudinaliter dehiscentes. Ovarii rudimentum 0. Fl. ♀: Sepala 5, angusta, mox aucta. Petala 0 (v. caducissima?). Ovarium 3-loculare; styli breves, patentes, crassiusculi, 2-partiti; ovula in loculis solitaria. Capsula ovoidea, calycis segmentis persistentibus elongatis stellato-patentibus stipata, in valvas crassiusculas demum sæpe 2-partitas loculicide dehiscens, septis præter alas columellæ subevanidis. Semina ovoidea, testa crustacea nitida; albumen carnosum; cotyledones planæ.—Arbusculæ glabræ. Folia alterna, petiolata, integerrima, penninervia, interdum ampla. Racemi terminales, sæpius breves, unisexuales v. androgyni basique ♀, rarius utriusque sexus ∞-flori; flores utriusque sexus longiuscule pedicellati.

Species 1 (varietates tamen insignes præbens). Brasiliæ borealis et Guianæ incola. *Muell. Arg. in DC. Prod.* xv. ii. 1113, *et in Mart. Fl. Bras.* xi. ii. 504, *t.* 70.

102. **Cluytia,** *Linn. Gen. n.* 1140 (Clutia). (Altora, *Adans. Fam.* ii. 356.)—Flores dioici, petaliferi. Fl. ♂: Sepala 5, imbricata, patentia. Petala totidem et sæpius longiora. Discus petalifer calycis basi adnatus, margine inter petala glandula v. squamula auctus et basi intus vario glandulifer v. rarius eglandulosus. Stamina 5, filamentis infra apicem columnæ centralis tenuis verticillatis patentibus, columna apice truncata v. leviter dilatata et vertice cava; antheræ breves, dorsifixæ, loculis parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum præter columnæ apicem 0. Fl. ♀: Perianthium maris. Ovarium 3-loculare; styli distincti v. basi brevissime connati, patentes, breviter v. longius 2-fidi; ovula in loculis solitaria. Capsula parva, ovoidea v. subglobosa, in valvas 3 integras v. 2-fidas crassiusculas septicide dehiscens, septis tenuibus liberatis v. columellæ adhærentibus. Semina ovoidea, compressiuscula, strophiolata, testa crustacea nigra nitida; albumen carnosum; cotyledones planæ, latæ.—Frutices v. fruticuli sæpe ericoidei. Folia alterna, integerrima, sæpius parvula. Flores parvi, ad axillas breviter pedicellati, fasciculati, v. ♀ interdum solitarii longiusque pedicellati.

Species editæ 28, Africæ tropicæ et australis incolæ, una diu in hortis culta in ins. Mauritio et forte alibi inquilina videtur. *Muell. Arg. in DC. Prod.* xv. ii. 1044. *A. Juss. Euph. Tent. t.* 6. *Baill. Etud. Euph. t.* 16. *Jacq. Hort. Schœnbr. t.* 250. *Willd. Hort. Berol. t.* 50 *ad* 52. *Jaub. et Spach, Ill. Pl. Or. t.* 465 *ad* 468. *Bot. Mag. t.* 1321, 1945. *Bot. Reg. t.* 779.

Genus nulli arcte affine, habitu et inflorescentia potius *Phyllanthreis* quam *Chrozophoreis* accedit, sed stamina centralia et ovarii loculi certe 1-ovulati.

103. **Agrostistachys,** *Dalz. in Hook. Kew Journ.* ii. 41.—Flores dioici, petaliferi. Fl. ♂: Calyx membranaceus, in alabastro globosus, per anthesin in lacinias 2-5 valvatim fissus. Petala 5, rarius 6-8, calyce breviora. Disci glandulæ petalis alternæ. Stamina ad 10 (8-13), receptaculo convexo affixa, filamentis basi subconnatis; antheræ ad apicem filamenti articulati, loculis a connectivo glanduliformi pendulis fere a basi distinctis longitudinaliter dehiscentibus. Ovarii rudimentum in medio flore plus minus evolutum, 2-3-fidum, v. rarius 0. Fl. ♀: Calyx alte 5-fidus rarius 6-fidus, lobis sæpius angustis. Petala calycem superantia, caducissima. Ovarium 3-loculare; styli breves, patentes, crassiusculi, 2-fidi; ovula in loculis solitaria. Capsula sicca v. carnosula, in coccos 2-valves dissiliens, endocarpio crustaceo. Semina in loculis sæpe abortu solitaria, subglobosa, testa crustacea nitidula; albumen crassum, carnosum; embryo rectus v. leviter incurvus, cotyledonibus latiusculis planis.—Frutices elatiores, glabri. Folia alterna, ampla, subsessilia v. basi in petiolum brevem contracta nec unquam basi rotundata,

sinuato-dentata v. integerrima. Spicæ axillares v. supra-axillares. Bracteæ concavæ, sæpe striatæ. Flores ♂ parvi, sub quaque bractea 3–∞, rarius solitarii, subsessiles v. brevissime pedicellati, ♀ solitarii, longius pedicellati.

Species 6 v. 7, Indiæ Orientalis et Africæ tropicæ incolæ. Genera duo sequentia a Muell. Arg. in DC. Prod. xv. ii. 725 et 726 recepta, nostro sensu rite a Baill. Adans. xi. 93, in unum junguntur, sed nomen Dalzellii Wightiano antiquius illi anteponendum est: 1. Agrostistachys, *Dalz.*, *Bedd. Ic. Pl. Ind. Or. t.* 241, distinguitur bracteis dense imbricatis, spicis pluribus parvis ad axillas v. supra axillas confertis spiculas glumacearum simulantibus, floribus ♂ sub bracteis 1–3. Huc referendæ *A. indica*, Dalz., e Peninsula et Zeylania, spicis distichis, et *A. Gaudichaudi*, Muell. Arg., e Malacca, spicis subteretibus, cui etiam referenda videtur *A. indica* var. *longifolia*, Muell. Arg.; et 2. Sarcoclinium, *Wight, Ic.* v. 24, *t.* 1887, 1888, spicarum rhachi elongata nunc longissima bracteis distantibus, floribus ♂ sub bractea quaque sæpe ∞. Speciebus 2 in Prodromo definitis adduntur 1–2 ex Archipelago Malayano spicis longissimis, floribus in glomerulis ♂ numerosis. *S. Hookeri*, Muell. Arg., e Zeylania, insignis est foliis stipulisque maximis, capsulis subcarnosis. *A. africana*, Muell. Arg., inter genera duo submedia est, spicis brevibus, bracteæ tamen dissitæ nec imbricatæ. In specie typica *Sarcoclinii*, spicæ interdum breves observantur.

104. **Argithamnia,** *Swartz, Prod.* 39; *et Fl. Ind. Occid.* 335, *t.* 8.—Flores monoici v. rarius dioici, petaliferi. Disci glandulæ petalis alternæ. Fl. ♂: Calycis segmenta 4–5, tenuia v. fere petaloidea, valvata. Petala 4–5, nunc integra calycem superantia, nunc brevia apice dilatata v. divisa. Stamina petalis numero æqualia dupla v. rarius triplo plura, filamentis basi brevissime v. altius in columnam connatis; antheræ ovoideæ v. oblongæ, dorso medio v. prope basin affixæ (in *Philyra* erectæ), loculis parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum ad apicem columnæ brevissimum v. apex inter stamina vix convexus. Fl. ♀: Sepala imbricata. Petala quam in mare sæpius minora, interdum parva, linearia. Ovarium 3-loculare; styli breves, patentes, varie laciniati, lobis angustis; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves dissiliens, endocarpio crustaceo. Semina subglobosa, nitidula; albumen carnosum; embryo rectus, cotyledonibus latis planis.—Frutices suffrutices v. herbæ perennes, plus minus sericeo-pubescentes v. pilosi, pilis simplicibus v. rarissime pube stellata intermixta. Folia alterna, membranacea v. mollia, integerrima v. paucidentata, rarius serrata. Flores ad axillas breviter v. rarius tenuiter racemosi, sub bracteis solitarii, superiores, rarius omnes ♂ parvi brevissime pedicellati, inferiores v. sæpius unus tamen in spica ♀ vix longius pedicellati. Calyx haud raro sub fructu auctus, herbaceus, segmentis patentibus.

Species editæ 37, Americæ tropicæ et subtemperatæ incolæ, a Chile et Bonaria usque ad Mexicum et civitates australiores Americæ borealis extensæ. *Muell. Arg. in DC. Prod.* xv. ii. 733, *et in Mart. Fl. Bras.* xi. ii. 308 (*Argyrothamnia*).

Genus in Prodromo in sectiones 5 sequentes dividitur, cum sexta (*Speranskia*) quam ad genus proprium restituimus:—

1. *Philyra.* Petala fl. ♂ a columna staminea libera. Stamina circa columnam 4–5, sub apice columnæ verticillata, antheris basifixis. Frutex brasiliensis, glaber, aculeis infrafoliaceis rectis solitariis v. geminis haud raro armatus, racemis brevissimis densis, bracteis rigidis. Philyra, *Klotzsch in Wiegm. Archiv.* vii. 199. *Baill. Etud. Euph. t.* 12. Vix non pro genere proprio retinendum.

2. *Ditaxis.* Petala in fl. ♂ basi brevissime columnæ stamineæ adnata. Stamina circa columnam 2- rarius 3-verticillata. Frutices suffruticesve plerique tropici. *Muell. Arg. in Mart. Fl. Bras.* xi. ii. *t.* 46. Ditaxis, *A. Juss. Euph. Tent.* 27, *t.* 7. *Baill. Etud. Euph. t.* 15. *H. B. et K. Nov. Gen. et Sp.* vii. *t.* 639.

3. *Aphora.* Omnia *Ditaxeos* nisi glandulæ disci magis prominulæ. Suffrutices v. herbæ perennes, plerique ex-America boreali v. centrali. Aphora, *Nutt. in Trans. Amer. Phil. Soc. ser.* 2, v. 174. Serophyton, *Benth. Bot. Sulph.* 52. Stenonia, *Didrichs. in Vidensk. Meddel. Nat. For. Kjöbenh.* 1857, 146.

4. *Euargithamnium.* Petala libera, integra. Stamina petalis isomera, filamentis vix in columnam elevatis. Species pleræque ex India occidentali.

5. *Chiropetalum.* Petala libera, brevia, dilatata, 2–∞-fida. Stamina petalis isomera, sub apice columnæ elevatæ verticillata. Species austro-Americanæ, pleræque extratropicæ. *Cav. Ic. t.* 557,

f. 2 (*Croton*). Chiropetalum, *A. Juss. in Ann. Sc. Nat. ser.* 1, xxv. 21; *Baill. Etud. Euph. t.* 15. Diplopterna, *Vell. Fl. Flum.* 95; *Ic.* ii. *t.* 146. Chlorocaulon, *Klotzsch in Endl. Gen. Suppl.* iv. iii. 89.

Nomen genericum a Sprengelio futile in Argothamnia, a Muellero in Argythothamnia mutatur. sed derivatur ex ἀργὸς seu ἄργιος, *albus*, potius quam ex ἄργυρος, *argentum*.

105. **Caperonia**, *St. Hil. Pl. Rem. Bras.* 244. (Cavanilla, *Vell. Fl. Flum.* 226; *Ic.* v. *t.* 102. Lepidococca, *Turcz. in Bull. Soc. Imp. Nat. Mosc.* 1848, i. 588. Androphoranthus, *Karst. Fl. Columb.* ii. 15, *t.* 108.)—Flores monoici v. rarius dioici, petaliferi. Discus obsoletus. Fl. ♂: Sepala valvata. Petala 5, columnæ stamineæ seu androphoræ intra calycem elevatæ affixa, imbricata. Stamina 10 v. abortu pauciora, circa columnam 2-verticillata; antheræ ovoideæ, loculis connectivo brevi separatis medifixis v. subpendulis longitudinaliter dehiscentibus. Ovarii rudimentum ad apicem columnæ clavatum. Fl. ♀: Sepala imbricata, æqualia v. inæqualia v. interdum lobis exterioribus 1–3 aucta. Petala quam in mare angustiora, interdum obsoleta. Ovarium sessile, 3-loculare; styli breves, lacero-multifidi; ovula in loculis solitaria. Capsula tridyma, sæpe hispida v. echinata, in coccos 2-valves dissiliens. Semina ecarunculata, subglobosa; albumen carnosum; cotyledones planæ, latæ.—Herbæ erectæ, rarius basi suffrutescentes, hispidæ, pilis rigidulis haud raro apice glanduligeris, rarius glabratæ. Folia alterna, breviter petiolata, sæpius serrata, angusta v. rarius ovata, penninervia, venis primariis sæpius subtus elevatis. Racemi axillares, pedunculati, floribus sub bracteis dissitis solitariis, superioribus ♂ parvis, inferioribus ♀ paucis. Calyx fructifer interdum sub capsula auctus patens.

Species enumeratæ 19, in herbariis valde confusæ et plures certe reducendæ, Americæ et Africæ inter tropicos incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 751, *et in Mart. Fl. Bras.* xi. ii. 317, *t.* 47. *Wawra in Pr. Maxim. Reise, Bot. t.* 43. *Lepidocroton*, Presl, huc ab auctoribus incaute relata, est *Chrozophoræ senegalensis* var. *abyssinica*, forte species distincta, etsi plantæ senegalensi valde affinis.

106. **Pseudocroton**, *Muell. Arg. in Flora*, 1872, 24.—Flores dioici? petaliferi. Disci glandulæ v. lobi petalis alterni. Fl. ♂: Sepala 4, valvata, alabastro 4-costato. Petala 4, calycem subæquantia, lepidota. Stamina ∞ (16–30) filamentis liberis; antheræ oblongæ, in alabastro erectæ, demum recurvæ, loculis parallelis arcte contiguis longitudinaliter dehiscentibus. Ovarii rudimentum columnare, dense lepidotum. Fl. ♀ ignoti.—Frutex v. arbor, ramulis inflorescentia et foliorum pagina inferiore dense lepidotis. Folia alterna, petiolata, oblongo-obovata v. elliptica, coriacea, integerrima, penninervia, supra nitidula. Racemi ♂ laxe pauciflori, in axillis inferioribus pedunculati v. foliis floralibus summis ad bracteam reductis v. evanidis subpaniculati.

Species 1, Americæ centralis incola. Specimina typica Guatemalensia non vidimus, sed mascula ad Acota in Nicaragua a R. Tate lecta cum charactere dato omnino conveniunt.

107. **Sumbavia**, *Baill. Etud. Euph.* 390. (Doryxylon, *Zoll. in Linnæa*, xxix. 469.)—Flores monoici, petaliferi. Discus obscurus. Fl. ♂: Calyx membranaceus, in alabastro globosus clausus, per anthesin valvatim fissus. Petala 5, brevia. Stamina numerosa, receptaculo convexo eglanduloso affixa, filamentis liberis erectis; antheræ oblongæ, erectæ, dorsifixæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx alte divisus, lobis angustis. Petala minuta. Ovarium 3-loculare; styli basi connati, recurvi, indivisi; ovula in loculis solitaria. Capsula, a nobis non visa, in coccos 2-valves dissiliens (*Zoll.*).—Arbores indumento stellari. Folia alterna, petiolata, ampla, 3-nervia, penninervia, integerrima, basi in una specie breviter peltata. Racemi spiciformes, axillares. Flores ♂ secus rhachin in glomerulos paucifloros sparsi, subsessiles, ♀ hinc inde in glomerulis ♂ solitarii, evidentius pedicellati.

Species 2, Malayanæ, quarum una tantum nobis nota. *Muell. Arg. in DC. Prod.* xv. ii. 727. Genus *Mallotο* valde affine, nec differt nisi petalorum præsentia.

108. **Tannodia**, *Baill. Adans.* i. 251, *t.* 7. (Tandonia, *Baill. l. c.* 184.)—Flores monoici,

petaliferi. Fl. ♂: Calyx 5-partitus, valvatus. Petala 5. Disci glandulæ 5, petalis alternæ. Stamina 10, 2-seriata, basi breviter connata, seriei exterioris petalis opposita; antheræ oblongæ, dorsifixæ, loculis staminum exteriorum introrsum, interiorum extrorsum contiguis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Sepala imbricata. Petala 5. Discus membranaceus, cupuliformis. Ovarium 3-loculare; styli basi connati, 2-fidi. Fructus . . .—Frutex inflorescentia pubescente excepta glaber. Folia alterna, petiolata, lata, integerrima, firme membranacea, 3–5-nervia. Racemi tenues, terminales, simplices. Flores utriusque sexus sub quaque bractea terni, breviter pedicellati. Bracteæ basi grosse 2-glandulosæ. (*Char. ex Baill.*)

Species 1, Madagascariensis, a nobis non visa. *Muell. Arg. in DC. Prod.* xv. ii. 728.

109. **Crotonogyne,** *Muell. Arg. in Flora*, 1864, 535, *et in DC. Prod.* xv. ii. 720.—Flores dioici, petaliferi. Fl. ♂: Calyx in alabastro globosus, clausus, per anthesin irregulariter in valvas 2–3 ruptus. Petala 5, calycem æquantia v. superantia. Stamina ∞ (15–20), receptaculo valde elevato crasso affixa, filamentis brevibus liberis; antheræ erectæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx 5-fidus, lobis angustis. Petala maris. Ovarium 3-loculare; styli 2-partiti, ramis linearibus indivisis (v. 2-fidis ex Muell. Arg.); ovula in loculis solitaria. Capsula in coccos 2-valves dissiliens, endocarpio crustaceo. Semina . . .—Frutex elatior, indumento sparso lepidoto. Folia alterna, ampla, integerrima, pennivenia, petiolo brevissimo, limbo basi 2-glanduloso. Flores secus pedunculum elongatum axillarem v. lateralem distantes, ♂ parvi, glomerati, subsessiles, ♀ paullo majores, sparsi, pedicello rigido fulti.

Species 1, Africæ tropicæ incola, in speciminibus perfectioribus ulterius examinanda.

110. **Chrozophora,** *Neck. Elem.* ii. 337. (Crozophora, *A. Juss. et Auct. recent.* Tournesolia, *Scop. Introd. ex Muell. Arg.* Lepidocroton, *Presl, Epimel. Bot.* 213.)—Flores monoici, petaliferi. Fl. ♂: Calyx in alabastro ovoideus v. globosus, clausus, per anthesin valvatim 5-partitus. Petala 5, calyci æqualia v. breviora. Discus inconspicuus. Stamina 5–15, filamentis basi in columnam connatis plus minus distincte 1–3-verticillatis; antheræ oblongæ, erectæ, basi v. dorso paullo altius affixæ, loculis parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calycis segmenta angusta. Petala angusta, interdum parva setacea v. 0. Glandulæ petalis alternæ, latæ, breves, parum prominulæ. Ovarium 3-loculare; styli erecti v. demum patentes, sæpe crassi, 2-fidi, ramis indivisis; ovula in loculis solitaria. Capsula subcarnosa, tridyma, in coccos 2-valves dissiliens. Semina ecarunculata, testa nitida v. tuberculoso-aspera; albumen carnosum; cotyledones latæ, planæ.—Herbæ ramosissimæ, sæpius diffusæ, rudes, rarius suffrutescentes, indumento stellato-tomentoso v. hispido. Folia alterna, sæpius undulato-dentata et plicato-rugosa. Racemi breves, densi, in axillis superioribus sessiles. Flores sub bracteis solitarii, ♂ in parte superiore conferti breviter v. brevissime pedicellati, ♀ ad basin pauci longius pedicellati, pedicello interdum elongato 2-floro. Capsulæ hispidæ tuberculatæ stellato-tomentosæ v. lepidotæ.

Species enumeratæ 6, in herbariis valde confusæ, nonnullæ revidendæ et forte iterum dividendæ v. reducendæ, regionis Mediterraneæ et Asiæ et Africæ tropicæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 746. *A. Juss. Euph. Tent. t.* 7. *Baill. Etud. Euph. t.* 15. *Nees, Gen. Fl. Germ. Monochl. n.* 37. *Reichb. Ic. Fl. Germ. t.* 152. *Sibth. Fl. Græc. t.* 950, 951 (*Croton*). *Delile, Fl. Egypt. t.* 51 (*Croton*). *Vis. Pl. Æg. ac Nub. t.* 7. *Schweinf. Pl. Nilot. t.* 3 *ad* 5.

Genus a Baillono, Hist. Pl. v. 181, cum *Argithamnio* et *Caperonia* sub nomine *Tournesoliæ* jungitur, cui ægre assentiri possumus. Genera affinia quidem, sed nobis tam habitu et patria quam characteribus bene definita videntur. Nomen, a χρώζω v. χρὼς derivatum, Necker rite *Chrozophora* scripsit, et forte lapsu calami postea in *Crozophora* mutatum fuit.

111. **Speranskia,** *Baill. Etud. Euph.* 388.—Flores monoici, petaliferi. Fl. ♂: Calyx membranaceus, in alabastro globosus, clausus, per anthesin valvatim fissus. Petala 4–5, brevia, lata, rotundata, basi contracta, crassiuscule squamiformia. Glandulæ inter petala minuta. Stamina ∞ (10–15), receptaculo convexo affixa, filamentis liberis;

antheræ terminales, loculis subglobosis connectivo separatis subpendulis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calycis segmenta angusta. Petala . . . Ovarium 3-loculare; styli 2-fidi, stigmatibus laceris (*Muell. Arg.*); ovula in loculis solitaria. Capsula late tridyma, in coccos 2-valves dissiliens. Semina estrophiolata, globosa; albumen carnosum; cotyledones planæ, latæ.—Caules e rhizomate lignoso herbacei, erecti, parce ramosi. Indumentum simplex. Folia alterna, sessilia, lanceolata, paucidentata. Racemus terminalis. Flores secus rhachin tenuem sub quaque bractea sæpius terni, superiores ♂, inferiores sæpe sub bractea uno ♀ cum 2 ♂.

Species 1, Chinæ borealis incola. Capsula ex Bungeo tuberculata, deest in speciminibus a Bungeo receptis, sed in aliis ex eodem loco pilosula est nec tuberculata. Genus a Muell. Arg. in DC. Prod. xv. ii. 734, ad *Argithamniam* relatum, sed nostro sensu longe differt habitu patria inflorescentia et staminibus.

112. **Manihot,** *Adans. Fam.* ii. 356. (Janipha, *H. B. et K. Nov. Gen. et Sp.* ii. 106, *t.* 109. Mandiocca, *Link, Handb.* ii. 436, *ex Endl.*)—Flores monoici, apetali. Fl. ♂: Calyx sæpe coloratus, campanulatus v. urceolatus, breviter v. alte 5-fidus, lobis imbricatis (an semper?) contortis. Stamina 10, 2-seriata, inter lobos v. glandulas disci affixa, filamentis liberis tenuibus; antheræ oblongæ, sæpius majusculæ, dorsifixæ, loculis parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum 0 v. in medio disco parvum 3-fidum v. 3-setosum. Fl. ♀: Calyx maris. Discus hypogynus sæpius evolutus, integer v. glandulosus. Ovarium 3-loculare; styli basi breviter connati, patentes, varie dilatati v. lobati; ovula in loculis solitaria. Capsula in coccos 2-valves dissiliens. Semina ovoidea v. oblonga, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Herbæ elatæ v. frutices rarius arborescentes, sæpius glaucescentes, glabri v. rarius tomentoso-villosi. Folia alterna, petiolata, indivisa v. sæpius digitatim 3-7-lobata v. partita, segmentis petiolulatis v. vario confluentibus membranaceis v. coriaceis penniveniis integerrimis v. sinuato-lobatis. Flores in ordine majusculi, racemosi, sub quaque bractea solitarii. Racemi terminales v. in axillis superioribus, simplices v. subramosi, laxiusculi, floribus superioribus ♂ breviter pedicellatis, ♀ sæpius ad basin racemi 1-3 longius pedicellatis. Bracteæ nunc parvæ nunc foliaceæ, integerrimæ v. margine fimbriatæ.

Species enumeratæ ad 80, omnes Americanæ, pro maxima parte Brasilianæ, paucæ per regiones calidiores usque ad Mexicum dispersæ, 1 v. 2 in variis terris tropicis diu cultæ. *Muell. Arg. in DC. Prod.* xv. ii. 1057, *et in Mart. Fl. Bras.* xi. ii. 438, *t.* 63 *ad* 67. *A. Juss. Euph. Tent. t.* 10 (*Janipha*). *Pohl, Pl. Bras. Ic.* i. 17, *t.* 10 *ad* 48. *Vell. Fl. Flum. Ic.* x. *t.* 80 *ad* 83 (*Jatropha*). *Baill. Etud. Euph. t.* 19. *Hook. Ic. Pl. t.* 530. *Bot. Mag. t.* 3071 (*Janipha*).

Specimina in herbariis sæpe valde imperfecta variationes foliorum male indicant et verisimiliter species plurimæ ab auctoribus descriptæ melius notæ in posterum reducendæ.

113. **Adriana,** *Gaudich. in Freyc. Voy. Bot.* 486, *t.* 116. (Trachycaryon, *Klotzsch in Pl. Preiss.* i. 175.)—Flores dioici, apetali. Discus 0. Fl. ♂: Calyx in alabastro globosus, clausus, per anthesin valvatim 4-5-partitus. Stamina ∞ (numerosa), in receptaculo convexo dense conferta, filamentis brevissimis liberis; antheræ lineares, erectæ, connectivo ultra loculos in acumen seu appendiculam linearem producto, loculis adnatis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Sepala 6-8, sub-2-seriatim imbricata. Ovarium 3-loculare; styli distincti v. basi brevissime connati, 2-fidi, ramis dense papilloso-fimbriatis; ovula in loculis solitaria. Capsula in coccos 2-valves dissiliens. Semina ovoidea, strophiola parva, testa coriacea; albumen carnosum; cotyledones planæ, latæ.—Frutices erecti, glabri v. stellato-tomentosi. Folia alterna v. opposita, petiolata v. subsessilia, 3-5-nervia, grosse dentata, cæterum indivisa v. 3-loba. Spicæ terminales v. ramulo excrescente mox oppositifoliæ, indivisæ, ♂ sæpius elongatæ floribus secus rhachin sessilibus sub quaque bractea 3-6; spicæ ♀ sæpius breves, densæ, intra folia summa sessiles v. brevissime pedunculatæ.

Species 5, Australianæ, a nonnullis ad 2 reductæ v. a Ferd. Mueller in unicum coacervatæ. *Benth. Fl. Austral.* vi. 133. *Baill. Etud. Euph. t.* 8. *Labill. Pl. Nov. Holl. t.* 223 (*Croton*).

114. **Pachystroma**, *Klotzsch in Herb. Berol.*; *Muell. Arg. in Linnæa* xxxiv. 177, *in DC. Prod.* xv. ii. 893, *et in Mart. Fl. Bras.* xi. ii. 387, *t.* 54. (Acantholoma, *Gaudich.*; *Baill. Adans.* vi. 231, *t.* 1.)—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx in alabastro ovoideus, clausus, per anthesin longior, apice valvatim 2-fidus. Stamina 3, filamentis basi in columnam primum ovoideam demum cylindraceam connatis, superne breviter liberis; antheræ magnæ, oblongæ, erectæ, dorsifixæ, connectivis primum dorso cohærentibus et ultra loculos in umbonem brevem productis, loculis parallelis distinctis superne connectivo breviter adnatis basi liberis extrorsum longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calycis lobi 3, imbricati, sub fructu patentes, rigidi, ineunte anthesi (ex Baill. et Muell. Arg.) ovarium arcte cingentes. Ovarium 3-loculare; styli (a nobis non visi) basi breviter connati, crassi, recurvi, indivisi; ovula in loculis solitaria. Capsula magna, lignosa, in coccos 2-valves dissiliens, receptaculo solo in speciminibus nostris superstante cum columella brevi inter coccos lignoso-incrassato pyramidato-triquetro ad angulos sub-3-cornuto. Semina ovoidea, testa crustacea; albumen carnosum; cotyledones latæ, planæ.—Arbor glabra. Folia alterna, breviter petiolata, coriacea, nitidula, margine plus minus spinoso-dentata v. rarius subintegerrima, penninvenia, venis primariis sat crebris transversis parallelis. Spicæ ♂ terminales, rhachi crassiuscula, floribus parvis sessilibus horizontaliter prominulis crebris at vix glomeratis. Fl. ♀ ad basin spicæ ♂ solitarii (v. gemini ?), pedicello brevissimo crasso fulti. Bracteæ imbricatæ, caducissimæ, spicam juniorem et florem ♀ includentes.

Species 1, Brasiliana. Stamina ex Muell. Arg. 5–6, nos in floribus pluribus a speciminibus variis sumptis semper 3 invenimus sed antherarum loculi in alabastro profunde sulcati antheras distinctas simulant. Flores ♀ examinare nequivimus, descriptiones Bailloni et Muelleri inter se vix quadrant. In icone citata *Acantholomatis* inflorescentia nec speciminibus nec descriptioni Bailloni convenit.

115. **Cephalocroton**, *Hochst. in Flora*, 1841, 370.—Flores monoici, apetali. Fl. ♂: Calyx in alabastro globosus, clausus, per anthesin valvatim 3–4-partitus. Discus 0. Stamina 6–8, filamentis liberis 2-seriatis superne inflexis iterumque sub anthera erectis; antheræ oblongæ, ab initio erectæ, dorsifixæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum breve. Fl. ♀: Sepala 5–6, elongata, inæqualia, lacero-pinnatifida. Discus annularis, vix lobatus. Ovarium 3-loculare; styli basi breviter connati, superne patentes, multifidi, laciniis læviusculis; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves dissiliens. Semina estrophiolata; albumen carnosum; embryo rectus, cotyledonibus planis latis.—Frutices indumento stellato sæpius parco. Folia alterna, petiolata, sæpius dentata, basi 3–5-nervia. Racemi terminales. Flores ♂ ad apicem rhacheos in capitulum subglobosum conferti, ♀ ad basin racemi 1–3 plus minus pedicellati.

Species 2, Africæ tropicæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 761 (Sect. *Eucephalocroton*). *Klotzsch in Peters. Reise Mossamb. Bot. t.* 17. *Baill. Etud. Euph. t.* 18.

116. **Adenochlæna**, *Baill. Etud. Euph.* 472. (Centrostylis, *Baill. l. c.* 469.)—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx in alabastro globosus, clausus, per anthesin in segmenta 4 (rarius 5–6 ?) valvatim partitus. Stamina totidem, filamentis liberis erectis v. summo apice breviter inflexis; antheræ terminales, supra medium dorsifixæ, loculis connectivo sæpe latiusculo separatis subpendulis longitudinaliter dehiscentibus. Ovarii rudimentum columnare, tenue v. crassum. Fl. ♀: Sepala 5–8, angusta, integerrima (v. demum glanduloso-dentata ?), valde inæqualia. Ovarium 3-loculare; styli basi in columnam connati, superne patentes, apice 2-fidi, ramis 2–∞-fidis; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves dissiliens. Semina estrophiolata, subglobosa, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Frutices v. arbores, indumento stellato sæpius tenui, foliis sæpe glabris. Folia alterna, breviter v. brevissime rarius longiuscule petiolata, basi sæpe cordata, penninvenia et basi sæpe 3–5-nervia. Racemi terminales. Flores ♂ nunc in parte superiore in glomerulos densos globosos conferti, nunc glomerulis ∞ inter se distantibus racemum tenuem formantes. Flores ♀ ad basin racemi pauci, sub bractea solitarii v. 2–3-ni.

Species nobis notæ 3, Indiæ orientalis incolæ, una Zeylanica CEPHALOCROTONIS sect., *Muell. Arg. in DC. Prod.* xv. ii. 762, altera Peninsulæ incola, *Bedd. Fl. Sylv. t.* 261, tertia Silhetensis, SYMPHYLLIA *Baill. Etud. Euph.* 473, *t.* 11. *Muell. Arg. in DC. Prod.* xv. ii. 763. Characteres florum omnino eosdem invenimus, in *A. zeylanica* Thw. inflorescentia abbreviata densa fere *Cephalocrotonis*, sed stamina bene distincta, in *A. indica* Bedd., racemi longiusculi interrupti, in *A.* (*Symphyllia*) *silhetensi* racemi adhuc longiores, florum glomerulis densissime globosis v. ovoideis dissitis et folia fere sessilia. Omnes nobis stricte congeneres videntur etsi tam a *Cephalocrotoni* quam a *Chloradenia* distinctæ. Species Madagascariensis a Baill. et Muell. Arg. descripta nobis ignota est.

117. **Bernardia,** *P. Br. Nat. Hist. Jam.* 361, *absque char. gen.* (Bivonia, *Spreng. Neue Entd.* ii. 116. Tyria, Phædra et Polybæa, *Klotzsch in Endl. Gen. Suppl.* iv. iii. 88. Traganthus, *Klotzsch in Wiegm. Archiv.* vii. 188, *t.* 9. Passæa, *Baill. Etud. Euph.* 507, *t.* 18. Alevia, *Baill. l. c.* 508.)—Flores monoici v. dioici, apetali. Discus 0 v. e glandulis distinctis. Fl. ♂: Calyx in alabastro globosus clausus, per anthesin valvatim 3–4-partitus. Stamina ∞ (3–20), filamentis liberis glandulis minutis sæpe intermixtis; antheræ terminales, erectæ v. rarius in alabastro nutantes, connectivo brevi crassiusculo et loculis distinctis brevibus ante dehiscentiam sulcatis v. 2-globosis quasi cruciatim 4-loculares. Ovarii rudimentum 0. Fl. ♀: Sepala ad 6 (5–9), imbricata. Ovarium 3-loculare; styli brevissimi, erecti, cum carpellis sæpe continui, integri 2-fidi v. laceri; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves dissiliens, endocarpio crustaceo v. indurato. Semina subglobosa, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Frutices rarius herbæ, indumento stellato v. simplici. Folia alterna, petiolata v. subsessilia, sæpissime dentata, penninervia, rarius parva v. angusta integerrimaque, in una specie perpauca v. 0 ramis junceis. Spicæ axillares, nunc utriusque sexus brevissimæ sessiles floribus dense confertis bracteis subimbricatis, nunc præsertim ♂ tenuiores longiusculæ, floribus dissite glomeratis v. ♀ sub bractea quaque solitariis. Flores ♂ sæpius minuti, ♀ interdum bracteolis paucis ab auctoribus nonnullis pro perianthii segmentis exterioribus descriptis stipati. Bracteæ spicæ ♂ sæpius concavæ, glomerulum fere includentes.

Species ad 24, Americæ tropicæ et subtropicæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 915, *et in Mart. Fl. Bras.* xi. ii. 390, *t.* 57. ADELIÆ species, *Linn.*; *Baill. Adans.* iv. 372, *t.* 10, 11 (antheris vix accurate delineatis).

Genus antherarum indole facile distinctum, a Muellero in sectiones 6 dividitur, characteribus levioris momenti e glandulis receptaculi staminum numero v. stylis integerrimis v. laceris deductis. Inter genera supra citata *Traganthus* distinguitur caule herbaceo annuo villoso, sed characteres bene *Bernardiæ* conveniunt. Speciebus Prodromi addetur *Ricinella myrciæfolia*, Muell. Arg. in DC. Prod. xv. ii. 729, quæ nobis omnino *Bernardia* videtur, *B. Gardneri*, Muell. Arg., affinis.

118. **Erythrococca,** *Benth. in Hook. Nig. Fl.* 506.—Flores dioici, apetali. Fl. ♂: Calyx tenuiter membranaceus, in alabastro clausus, per anthesin valvatim 3-partitus. Stamina 3–6, filamentis brevibus basi in annulum connatis; antherarum loculi a basi distincti, erecti, subglobosi, ab apice longitudinaliter dehiscentes. Ovarii rudimentum 0. Fl. ♀: Calyx 3-partitus, segmentis angustis. Disci glandulæ 2. Ovarium 2-loculare; styli breves, a basi plumoso-multifidi; ovula in loculis solitaria. Capsula (an semper?) abortu 1-locularis, 1-sperma, globosa, indehiscens, exocarpio tenuiter carnoso, endocarpio crustaceo. Semen . . .—Frutex glaber, ramis tenuibus teretibus aculeis geminis infrastipularibus armatis. Folia breviter petiolata, membranacea, integerrima v. vix dentata. Inflorescentia ad axillas fasciculata, ♂ subcymosa e ramulis ∞ brevibus multifloris sessilibus composita, floribus secus rhachin fasciculatis pedicellatis minutis; fl. ♀ pauci, pedicellis 1-floris in axilla subfasciculatis.

Species 1, Africæ tropicæ incola. *Muell. Arg. in DC. Prod.* xv. ii. 791.

119. **Hasskarlia,** *Baill. Adans.* i. 51.—Flores dioici, apetali. Fl. ♂: Calyx tenuiter membranaceus, 3-partitus, segmentis subvalvatis. Discus 0. Stamina 3, receptaculo affixa, filamentis brevissimis; antheræ erectæ, usque ad basin in locellos 4 demum a basi distinctos erectos obovoideo-globosos latere interiore ab apice dehiscentes divisæ. Ovarii

rudimentum 0. Fl. ♀ : Calyx parvus v. 3-partitus ; disci hypogyni squamæ 3, petaloideæ, calycis segmentis subæquilongæ iisque alternæ. Ovarium carnosum, 3-loculare ; styli plani, dilatati, in orbem patentes, apici ovarii appressi ; ovula in loculis solitaria, obturatore magno. Fructus obscure tridymus, in speciminibus nostris immaturus, ex Baill. 3-coccus. —Arbor 40–80-pedalis (*Barter et Mann*), v. frutex 8–15-pedalis (*Welwitsch*), undique glaberrimus. Folia alterna, breviter petiolata, ampla, integerrima, nitidula, pennivenia. Spicæ ♂ axillares laterales v. fere oppositifoliæ, amentiformes, floribus arcte approximatis subsessilibus ; pedunculi ♀ axillares v. laterales, breves 1- (v. 2–3- ?) flori.

Species 1, Africæ tropicæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 774. Genus evidenter *Claoxylo* affine, a Baillono *Tetrorchidio* comparatum, sed stamina sepalis alterna nec opposita, inflorescentia aliique characteres longe distant.

120. **Claoxylon,** *A. Juss. Euph. Tent.* 43, *t.* 14. (Erythrochilus, *Reinw. in Bl. Bijdr.* 614.)—Flores dioici v. rarius monoici, apetali. Discus varius. Fl. ♂ : Calyx in alabastro subglobosus, clausus, per anthesin valvatim 3–4-partitus. Stamina sæpius numerosa, receptaculo v. disco centrali affixa, glandulis v. lobis disci varie intermixta, filamentis liberis ; antherarum loculi distincti, erecti, obovoidei v. subglobosi, ab apice longitudinaliter dehiscentes. Ovarii rudimentum 0. Fl. ♀ : Calyx minus alte divisus, lobis 2–4 (an semper ?) valvatis. Discus margine integer v. lobatus. Ovarium 3- rarius 2-loculare ; styli breves, liberi v. basi connati, patentes, indivisi ; ovula in loculis solitaria. Capsula in coccos 2-valves dissiliens. Semina estrophiolata, subglobosa, testa crustacea ; albumen carnosum ; cotyledones latæ, planæ.—Arbores fruticesve glabri v. pube appressa brevi vestiti. Folia alterna, petiolata, sæpius ampla, membranacea v. vix coriacea, integerrima v. dentata, pennivenia. Racemi axillares v. laterales, solitarii v. subfasciculati, foliis breviores. Flores parvi, ♂ secus rhachin fasciculati, ♀ solitarii sparsi.

Species enumeratæ 42, Africæ, Asiæ et Australiæ intra tropicos et ins. maris Pacifici incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 775. *Benth. Fl. Austral.* vi. 129. *Kurz, For. Fl. Brit. Burm.* ii. 395. *Bedd. Ic. Pl. Ind. Or. t.* 231.

Genus in sectiones plures dividit Muell. Arg., imprimis ex dispositione glandularum receptaculi floris ♂ ; quæ tamen variant fere de specie in speciem et semper minutæ difficillime observantur. Baillon genus totum in *Mercuriali* includit.

121. **Micrococca,** *Benth. in Hook. Nig. Fl.* 503.—Flores monoici v. subdioici, apetali. Fl. ♂ : Calyx tenuiter membranaceus, in alabastro clausus, per anthesin valvatim 3-partitus. Stamina ∞ (3–10), receptaculo convexo affixa, glandulis paucis minimis intermixta, filamentis distinctis ; antherarum loculi a basi distincti, obovoidei, jam in alabastro erecti, ab apice longitudinaliter dehiscentes. Ovarii rudimentum 0. Fl. ♀ : Sepala 3–4, imbricata. Laminæ hypogynæ (an disci lobi ?) 3–4, lineares, coccis alternæ, calyce vix breviores. Ovarium 3- rarissime 4-loculare ; styli distincti, subpatentes, breves, lineares, indivisi ; ovula in loculis solitaria. Capsula 3–4-cocca, coccis fere a basi distinctis 2-valvibus. Semina globosa, testa crustacea ; albumen carnosum ; cotyledones planæ, latæ.—Herba annua, erecta, ramosa, basi sæpe indurata. Folia alterna exceptis interdum primordialibus oppositis, petiolata, membranacea, sæpius dentata, pennivenia. Racemi axillares, rhache filiformi. Flores ♂ minuti, fasciculati, in racemis ♂ in quoque fasciculo ∞ breviter pedicellati, in racemis androgynis pauci, sæpius 1-2 in quoque fasciculo cum unico ♀ longius pedicellato. Capsulæ parvæ.

Species 1, in cultis Africæ et Asiæ tropicæ frequens, a *Thwaitesio Enum. Pl. Zeyl.* 271, et a *Muell. Arg. in DC. Prod.* xv. ii. 789 ad *Claoxylon* relata. Antherarum loculi erecti distincti ut in hoc genere, sed habitu et floribus ♀ potius *Mercuriali* accedit, a qua differt foliis alternis, antheris erectis et pistillo sæpius 3-mero. Antheræ ex Muell. Arg. in *Micrococca* introrsum 2-rimosæ sunt, dum in cæteris *Claoxylis* extrorsum 2-rimosas dicuntur, sed hæc distinctio nobis effugit. Baillon *Micrococcam* cum *Claoxylo* aliisque sub *Mercuriali* includit.

122. **Mercurialis,** *Linn. Gen. n.* 1125.—Flores dioici v. casu monoici, apetali. Fl. ♂ : Calyx tenuiter membranaceus, in alabastro globosus v. ovoideus, clausus, per anthesin

valvatim 3-partitus. Discus 0. Stamina ∞ (8–20), filamentis liberis receptaculo parvo affixis; antherarum loculi a basi distincti, globosi v. ovoidei, divaricati v. primum penduli demum ascendentes, superne longitudinaliter dehiscentes. Ovarii rudimentum 0. Fl. ♀: Sepala 3 (leviter imbricata?). Laminæ hypogynæ (an disci lobi?) 2, lineari-subulatæ, coccis alternæ. Ovarium 2-loculare, rarius casu 3-loculare; styli vix basi connati, breves, erecti v. divergentes, intus prominenter papillosi, indivisi; ovula in loculis solitaria. Capsula didyma, in coccos 2-valves dissiliens, endocarpio crustaceo. Semina ovoidea v. globosa, lævia v. tuberculata, testa crustacea; albumen carnosum; cotyledones latæ, planæ.—Herbæ annuæ v. rhizomate perenni, rarius basi sublignosæ, glabræ pubescentes v. tomentoso-lanatæ. Folia opposita, sæpius dentata, pennivenia. Racemi axillares, ♂ graciles, floribus supra medium in glomerulos paucos distantes collectis; ♀ in plerisque brevissimi, floribus 1–2 ad axillas subsessilibus, in *M. perenni* longiores, floribus 1–3 in pedunculo communi distantibus.

Species 6, pleræque Europææ, imprimis e regione Mediterranea occidentali, quarum una per varias regiones dispersa sæpe inquilina, altera Asiæ orientali propria. *Muell. Arg. in DC. Prod.* xv. ii. 794. *A. Juss. Euph. Tent. t.* 14. *Baill. Etud. Euph. t.* 9. *Nees, Ic. Gen. Fl. Germ. Monochl.* n. 40. *Reichb. Ic. Fl. Germ. t.* 151, 152. *Moris. Fl. Sard. t.* 110. *Vent. Jard. Cels. t.* 12.

123. **Leidesia,** *Muell. Arg. in DC. Prod.* xv. ii. 792.—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx tenuiter membranaceus, in alabastro clausus, per anthesin valvatim 3-partitus. Stamina ∞ (4–7), filamentis brevibus tenuibus basi hinc inde connatis; antherarum loculi globosi, a basi distincti, demum patenter 2-valves. Ovarii rudimentum 0. Fl. ♀: Calyx 0 v. ad bracteam unicam brevem angustam reductus. Ovarium 2-loculare; styli distincti, lineares, indivisi; ovula in loculis solitaria. Capsula in coccos 2-valves dissiliens, interdum abortu 1-cocca, endocarpio tenuiter crustaceo. Semina subglobosa, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Herbæ teneræ, annuæ, ramosæ. Folia alterna v. ad ramificationes subopposita, longe petiolata, tenera, ovata v. orbiculata, late dentata v. integerrima. Racemi terminales v. in dichotomiis, rhachi filiformi. Flores ♂ minimi, apicem versus racemi in fasciculos plures dispositi, ♀ ad basin rhacheos pauci, bractea foliacea stipati. Bracteæ et calyces fl. ♂ sæpe setoso-ciliati. Capsulæ parvæ.

Species 2, Africæ australis incolæ. *Benth. in Hook. Ic. Pl. t.* 1284.

124. **Adenocline,** *Turcz. in Bull. Soc. Imp. Nat. Mosc.* 1843, 59, et 1852, ii. 179. (Diplostylis, *Sond. in Linnæa* xxiii. 113.)—Flores monoici, apetali. Fl. ♂: Calyx tenuiter membranaceus, alte 5-lobus, jam ante anthesin apertus, lobis primum valvatis? v. ex Muell. Arg. imbricatis. Glandulæ v. lobi receptaculi inter stamina plura. Stamina ∞ (6–12), filamentis brevibus liberis; antheræ terminales, loculis discretis globosis divaricatis vertice dehiscentibus, anthera effœta quasi 2-valvi. Ovarii rudimentum 0. Fl. ♀: Calyx 5-partitus, ovario sæpe æquilongus, segmentis angustis æqualibus leviter imbricatis. Ovarium 3-loculare; styli tenues, 2-partiti, recurvo-patentes, basi brevissime connati; ovula in loculis solitaria. Capsula parva, tridyma, pericarpio tenui, in coccos 2-valves dissiliens. Semina globosa, testa tenuiter crustacea; albumen carnosum; cotyledones ovatæ, radicula vix duplo latiores.—Herbæ tenues, diffusæ, annuæ v. basi perennes. Folia alterna v. rarius opposita, nunc angusta et integerrima nunc latiora denticulata, membranacea. Flores minimi, ad axillas laxe cymulosi, inflorescentia interdum ad apices ramorum foliis floralibus diminutis fere in racemum abeunte; flores ♂ sæpius plurimi, ♀ pauci ad basin cymularum v. in axillis distinctis.

Species 3 v. 4, Africæ australis incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1139. *Baill. Etud. Euph. t.* 9, inclusa Paradenocline, *Muell. Arg. l.c.* 1141, quam auctor distinxit antherarum loculis pendulis, quod tamen confirmare nequimus. Antheræ in omnibus speciebus nobis subsimiles videntur, loculis primum suberectis dein divergentibus post dehiscentiam patentibus interdum fere reflexis.

125. **Seidelia,** *Baill. Etud. Euph.* 465, *t.* 9.—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx tenuiter membranaceus, in alabastro depresso-globosus, per anthesin valvatim

3-partitus. Stamina 3, rarius 2, in centro floris segmentis alterna, filamentis basi brevissime connatis; antheræ terminales, loculis distinctis ante anthesin profunde sulcatis fere 2-globosis apice dehiscentibus, anthera aperta cruciatim 4-valvi. Ovarii rudimentum 0. Fl. ♀: Calyx brevis, alte 3-fidus, sub ovario patens. Ovarium 2-loculare; styli breves, tenues, recurvo-patentes; ovula in loculis solitaria. Capsula parva, in coccos 2-valves dissiliens, pericarpio membranaceo. Semina ovoidea, testa crustacea; albumen carnosum; cotyledones ovatæ, radicula vix duplo latiores.—Herba annua, pumila, glabra. Folia alterna, angusta, integerrima. Flores parvi, ad apices ramulorum v. in axillis superioribus cymulosi v. fasciculati, breviter pedicellati, inferiores plures ♀, superiores densius fasciculati ♂.

Species 1, Africæ australis incola, a *Muell. Arg. in DC. Prod.* xv. ii. 947, invita natura *Tragia* inclusa. Genus nobis *Adenoclini* valde affine videtur, etsi floris partium numero et antherarum forma satis distinctum.

126. **Acalypha,** *Linn. Gen. n.* 1082. (Cupameni, *Adans. Fam.* ii. 356.)—Flores monoici v. rarius dioici, apetali. Discus 0. Fl. ♂: Calyx tenuiter membranaceus, in alabastro clausus, per anthesin valvatim 4-partitus. Stamina ∞ (sæpius 8), receptaculo parum elevato affixa, filamentis liberis; antherarum loculi distincti, divaricati, sæpius oblongi v. lineares et in flore aperto sæpissime flexuosi vermiformes. Ovarii rudimentum 0. Fl. ♀: Sepala 3–4, imbricata, nunc minima. Ovarium 3-loculare; styli liberi, filiformes, sæpius in lacinias filiformes divisi, rarius indivisi; ovula in loculis solitaria. Capsula tridyma, sæpius parva, in coccos 2-valves dissiliens. Semina subglobosa, testa crustacea; albumen carnosum; cotyledones latæ, planæ.—Herbæ frutices v. arbores, habitu vario. Folia alterna, sæpius ovata, plus minus dentata, 3–5-nervia v. pennivenia, petiolo sæpius longiusculo. Flores ♂ parvi, sub bracteis parvis glomerati, in spicas amentiformes v. tenues elongatasque dispositi; ♀ intra bracteam demum sæpe auctam foliaceamque solitarii v. 2–4-ni; bracteæ ♀ nunc ad basin spicarum mascularum solitariæ v. paucæ, nunc in spica distincta distantes v. confertæ, nunc laxe paniculatæ v. singulæ pedicello longo capillari fultæ; spicæ ♂ et androgynæ axillares v. rarissime terminales; ♀ nunc uti ♂ axillares v. laterales, nunc terminales, solitarii v. fasciculati.

Species notæ ad 220, per regiones calidiores utriusque orbis late dispersæ, perpaucæ imprimis inter Americanas extratropicæ. *Muell. Arg. in DC. Prod.* xv. ii. 800, *et in Mart. Fl. Bras.* xi. ii. 339, *t.* 53. *Benth. Fl. Austral.* vi. 132. *A. Juss. Euph. Tent. t.* 14 (*Acalypha et Caturus*). *Gærtn. Fruct. t.* 107. *Baill. Etud. Euph. t.* 20. *Cav. Ic. t.* 568 *ad* 570. *Jacq. Hort. Schœnbr. t.* 245 *ad* 246; *Ic. Rar. t.* 620. *Hook. Comp. Bot. Mag. t.* 29. *Wight, Ic. t.* 877. *Seem. Fl. Vit. t.* 58. *Benth. in Hook. Ic. Pl. t.* 1291. *Grant in Trans. Linn. Soc.* xxix. *t.* 96 *ad* 98. *Vahl, Symb. t.* 20. *Benth. Bot. Sulph. t.* 53. *Anders. in Eugen. Resa, Bot. t.* 14. *Pæpp. et Endl. Nov. Gen. et Sp. t.* 224, 225.

Genus bene limitatum et pro maxima parte antheris stylis et bracteis facillime dignoscendum, etsi in paucis speciebus bracteæ parvæ remanent v. styli indivisi v. antheræ vix tortæ. Linostachys, *Klotzsch in Linnæa*, xix. 235 (Gymnalypha, *Griseb. in Bonplandia*, vi. 2) pro sectione in Prodromo admissa, species continet paucas Americanas cum una Asiatica inflorescentia ♀ insignes; paniculæ terminales v. laterales tenuissimæ, rhachi ramulisque capillaceis, bracteis minimis sub fructu haud auctis; spicæ omnino normales. *Jacq. Hort. Vind.* iii. *t.* 47. Species sectionis alterius *Euacalyphæ*, Muell. Arg., maximam partem generis formantes, a Muellero in series plures ordinantur, imprimis ad inflorescentiam et positionem rationemque florum ♂ et ♀. Huc referantur icones omnes supra sub genere citatæ, et inter formas quodammodo abnormes includuntur; Caturus, *Linn. ex Schreb. Gen. Pl.* 677 (Galurus, *Spreng. Syst.* i. 138), species indica, bracteis ♀ sub fructu non auctis; Odonteilema, *Turcz. in Bull. Soc. Imp. Nat. Mosc.* 1848, i. 587, species Brasiliensis quæ ob stylos longos simplices generice distincta fuit, sed character hinc inde in variis speciebus habitu diversis observatur; et Calyptrospatha, *Klotzsch in Peters. Mossamb. Bot.* 96, *t.* 18, species Africana bracteis sub floribus ♀ majusculis in sicco complicatis. In *A. indica*, Linn., speciebusque nonnullis aliis tam Americanis quam gerontogeis spica androgyna superne mascula sæpe terminatur flore parvo longe pedunculato heteromorpho fœmineo v. subhermaphrodito varie obliquo v. recurvo quoad perianthium et ovarium imperfecto sæpius tamen fertili capsula monosperma. In paucis aliis speciebus flores ♀ dimorphi, alii subsessiles normales, alii gracile pedunculati minimi ovario capsulaque fere 3-partitis.

127. **Mareya**, *Baill. Adans.* i. 73.—Flores monoici, apetali. Fl. ♂: Calyx in alabastro globosus, clausus, per anthesin valvatim 3–4-partitus. Discus 0. Stamina ∞ (10–20), receptaculo convexo glanduloso affixa, filamentis liberis in alabastro flexuosis; antherarum loculi distincti, oblongi, substipitati, in alabastro penduli, demum flexuoso-ascendentes, apice dehiscentes. Ovarii rudimentum 0. Fl. ♀: Sepala 4–6, lata, imbricata. Discus explanatus, vario lobatus. Ovarium 3- rarius 4-loculare; styli distincti, recurvi, indivisi, papilloso-plumosi; ovula in loculis solitaria. Capsula tridyma, pubescens, in coccos 2-valves dissiliens. Semina lævia; albumen carnosum; cotyledones latæ, planæ.—Frutices v. arbusculi. Folia alterna, petiolata, majuscula, integerrima v. obtuse serrata, penni-venia. Spicæ tenues, axillares laterales v. ad apices ramorum confertæ, foliis sæpius longiores. Flores secus rhachin glomerati, nunc omnes in glomerulo ♂, nunc in quoque glomerulo 1 ♀ cum 2 v. ∞ ♂. Capsulæ parvæ.

Species (v. ex Muell. Arg. varietates) 2, Africæ tropicæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 792. *Benth. in Hook. Ic. Pl. t.* 1281. Genus *Acalyphæ* valde affine, sed satis differre videtur habitu, staminum numero et floribus fœmineis.

128. **Adelia**, *Linn. Gen. n.* 1137, *pro parte*. (Ricinella, *Muell. Arg. in Linnæa* xxxiv. 153.)—Flores dioici, apetali. Fl. ♂: Calyx in alabastro clausus, per anthesin valvatim partitus. Disci glandulæ calycis basi adnatæ. Stamina ∞ (8–15), filamentis liberis brevibus; antheræ versatiles, prope basin dorsifixæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Sepala angusta, per anthesin reflexa. Discus explanatus. Ovarium 3-loculare, styli reflexo-patentes, laciniati, lobis angustis; ovula in loculis solitaria. Capsula tridyma, in coccos 3-valves dissiliens, endocarpio crustaceo. Semina subglobosa, lævia; albumen carnosum; embryo rectus, cotyledonibus latis planis.—Frutices præter inflorescentiam glabri v. rarius tomentosi, ramulis interdum apice v. ad axillas spinescentibus. Folia alterna v. ad nodos conferta, membranacea v. chartacea, integerrima, pennivenia, breviter petiolata. Flores parvi, ♂ ad axillas fasciculati, fere sessiles, ♀ solitarii, longiuscule pedicellati.

Species ad 7, Indiæ occidentalis, Americæ centralis et forte Columbiæ (si huc pertinet Fendleri n. 1224) incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 729 (*Ricinella* excl. *R. myricæfolia* ad *Bernardiam* pertinente) *et in Mart. Fl. Bras.* xi. ii. 306. Nomen Linnæanum a Muell. Arg. rejicitur ob prioritatem *Adeliæ* P. Browne, qui vero genus (*Forestieram*) sub hoc nomine non definivit, etsi species ope iconis suæ agnoscenda sit.

129. **Leucocroton**, *Griseb. Erlaut. Pfl. Trop. Amer.* 20.—Flores dioici, apetali. Discus anguste explanatus vix in glandulas divisus. Fl. ♂: Calyx in alabastro globosus, clausus, per anthesin valvatim 3–5-fidus. Stamina ∞ (6–10) receptaculo convexo affixa, filamentis brevibus liberis; antheræ dorsifixæ, oblongæ, loculis contiguis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum villosulum. Fl. ♀: Calyx 5-partitus, sepalis vix valvatis. Ovarium 3-loculare; styli breves, patentes, crassi, brevissime 2-lobi, lobis breviter radiato-multifidis; ovula in loculis solitaria. Capsula tridyma, in coccos bivalves dissiliens. Semina subglobosa, testa lævi; albumen carnosum; cotyledones latæ, planæ.—Frutices indumento brevi stellulato v. sublepidoto. Folia alterna, coriacea, supra glabra, transversim v. oblique pennivenia, venulosa. Spicæ v. racemi axillares, folio multo breviores. Flores ♂ secus rhachin sessiles v. breviter pedicellati, sub quaque bractea glomerati, ♀ sub bracteis solitarii, secus rhachin pauci, v. uno solo subterminali.

Species genuinæ 2, v. 3, Cubenses. *Muell. Arg. in DC. Prod.* xv. ii. 756. *Wright in Sauv. Fl. Cub.* 129, ubi *L. flavescens latifolius* ad varietatem *L. Wrightii* reducitur, et *L. flavescens angustifolius* pro specie propria bene distinguitur sub nomine *L. revoluti*. His addenda est *L. virens*, Griseb., qui primo aspectu longe differt foliis basi 5-nerviis pube stellata mollibus, sed flores ♀ similiter ad apicem rhacheos solitarii. Flores ♂ nobis desunt.

130. **Chloradenia**, *Baill. Etud. Euph.* 471, *t.* 19. (Adenogynum, *Zoll. in Linnæa* xxviii. 325.)—Flores monoici, apetali. Fl. ♂: Calyx in alabastro clausus, per anthesin valvatim 3–4-partitus. Discus 0. Stamina 3–5, filamentis liberis superne inflexis;

antheræ dorsifixæ, versatiles, loculis contiguis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum angustum. Fl. ♀ : Sepala 5–6, demum basi contracta. Disci glandulæ sepalis alternæ. Ovarium 3- rarius 4-loculare; styli basi longiuscule connati, superne liberi, lineares, 2-partiti, ramis indivisis; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves dissiliens, endocarpio crustaceo. Semina albuminosa, cotyledonibus latis planis.—Frutex indumento stellato sæpius albido. Folia alterna, longe petiolata, ampla, dentata, basi 3–5-nervia, subpeltata, supra glaberrima. Racemi axillares, petiolo sæpius breviores. Flores ♂ ad apicem parvi, in capitulum subglobosum conferti, bracteis parvis angustis, ♀ ad basin capituli solitarii, maribus multo majores, dense tomentosi. Bracteæ in pedunculo sub inflorescentia foliaceæ, parvulæ.

Species nobis nota 1, Javanica. *Muell. Arg. in DC. Prod.* xv. ii. 761, sub *Cephalocrotone*. Species altera, a Blumeo dubie ad *Adiscam* relata, ex descriptionibus longe aliena est, versimiliter rite a Zollingero in Linnæa xxviii. 322 ad *Crotonem* relata.

Genus a *Cephalocrotone* nobis longe differre videtur habitu, inflorescentia axillari, staminum numero, stylorum ramis longis indivisis aliisque notis. Filamenta in hoc et in *Cephalocrotone* a Baillono rite descripta et delineata, a Muellero 'supra insertionem antherarum genuflexo-producta,' dicuntur quod non intelligimus, nam antheras semper ad apicem filamenti inflexi versatiles vidimus.

131. **Cœlodepas,** *Hassk. in Flora* 1857, 531, *et Hort. Bogor. Descr.* 44. (Koilodepas, *Hassk. in litt. ex Bot. Zeit.* 1856, 802.)—Flores dioici v. monoici, apetali. Discus 0. Fl. ♂ : Calyx in alabastro globosus, clausus, per anthesin valvatim 3–4-partitus. Stamina 4–8, uniseriata, filamentis crassis basi v. ultra medium cuneato-dilatatis connatisque superne liberis contractis acutis; antheræ terminales, loculis a connectivo parum distincto introrsum pendulis v. lateraliter divergentibus longitudinaliter dehiscentibus. Ovarii rudimentum e columna staminea breviter protrusum. Fl. ♀ : Calyx cupulatus, ovario appressus, late 4–10-fidus, lobis imbricatis. Ovarium 3-loculare; styli patentes, complanati, 2–∞-fidi, lobis dentatis v. introrsum fimbriato-multifidis; ovula in loculis solitaria. Capsula tridyma, perianthio plus minus aucto stipata, in coccos 2-valves dissiliens. Semina subglobosa, testa crustacea; albumen carnosum; cotyledones latæ, planæ.—Arbores inflorescentia excepta subglabræ. Folia breviter petiolata, oblonga, chartacea, integerrima v. sæpius dentata, pennivenia. Spicæ ♂ ad axillas solitariæ v. fasciculatæ, floribus secus rhachin glomeratis. Flores ♀ ad basin spicarum ♂ 1–2, v. in spicas ad axillas solitarias 1–4-floras dispositi, sub quaque bractea solitarii. Capsula stellato-tomentosa.

Species 3, altera Javanica, altera Peninsulæ Indiæ Orientalis incola. *Muell. Arg. in DC. Prod.* xv. ii. 759. *Bedd. Fl. Sylv. t.* 320. *Benth. in Hook. Ic. Pl. t.* 1288. Flores ♂ speciei typicæ in specimine nostro desunt, ex Hassk. filamenta in cupulam 4–6-lobam connata, antheris ex apice introrsum pendulis; in specie inedita e Penang, Wall. Cat. Herb. Ind. n. 9098, filamenta 6–8 basi tantum in cupulam connata superne libera, antheris ut in *C. bantamensi* ex apice introrsum pendulis; in *C. calycino* filamenta superne breviter libera, antherarum loculis lateraliter divergentibus.

132. **Bocquillonia,** *Baill. Adans.* ii. 225.—Flores dioici, apetali. Discus 0. Fl. ♂ : Calyx membranaceus, in alabastro ovoideus, clausus, per anthesin valvatim 2- rarius 3-partitus. Stamina 2, rarius 3, filamentis basi in columnam connatis superne liberis sæpe inæqualibus; antheræ ovoideæ, dorso prope apicem affixæ, connectivo parvo, loculis distinctis parallelis subextrorsum longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀ : Calyx brevis, segmentis 4–5 imbricatis. Ovarium 3-loculare; styli complanati, lati, crassiusculi, vertici ovarii arcte appressi; ovula in loculis solitaria. Capsula in coccos 2-valves dissiliens, endocarpio duro. Semina oblonga, testa tenuiter crustacea v. submembranacea; albumen carnosum; cotyledones latæ, planæ.—Arbores fruticesve. Folia alterna, coriacea, integerrima v. obscure sinuato-dentata, pennivenia. Flores ♂ minuti, numerosissimi, in capitula globosa v. oblonga in ramis annotinis v. vetustioribus sessilia densissime glomerati, ♀ pauciores, pariter in ramis lignosis sessiles v. breviter spicati.

Species 5 v. 6, Novo-Caledonicæ, *Muell. Arg. in DC. Prod.* xv. ii. 894. *Baill. Adans.* xi. 127. Inter illas tamen *B. brevipes*, Muell. Arg., floribus ♂ ignotis adhuc dubia remanet, nam spica

♀ axillari elongata a cæteris speciebus longe differt. Genus characteribus *Alchorneæ* accedit, inflorescentia diversum.

133. **Adenophædra**, *Muell. Arg. in Mart. Fl. Bras.* xi. ii. 385, *t.* 101.—Flores dioici, apetali. Fl. ♂: Calyx in alabastro subglobosus, clausus, per anthesin valvatim 3-partitus rarius 2-partitus. Stamina 3, rarius 2, segmentis alterna, filamentis brevibus crassis basi connatis; antheræ ovatæ, loculis distinctis semiadnatis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Sepala 6, 1-seriatim imbricata, 3 interioribus minoribus. Ovarium 3-loculare; styli in discum stigmatosum obtuse 3-lobum ovarii apici adnatum connati, ovula in loculis solitaria. Capsula depressa, tridyma, in coccos 2-valves dissiliens. Semina globosa, lævia.—Frutex arborescens. Folia alterna, brevissime petiolata, ampla, dentata, tenuiter coriacea, penninevia. Spicæ tenues, elongatæ, ♂ in axillis superioribus v. ad apices ramorum confertæ, ♀ (terminales ?) simplices. Flores ♂ minimi, secus rhachin dissite glomerati, ♀ sub quaque bractea solitarii, secus rhachin distantes, brevissime pedicellati. (*Char. ex ic. et descr. Muell. Arg.*)

Species 1, Brasiliana, a nobis non visa, olim a Muellero in *Bernardia* inclusa, sed forte *Alchorneæ* affinior, etsi stylo distinctissima. Species altera a Muellero l. c. ad *Adenophædram* relata (*Tragia grandifolia*, Klotzsch, e Guiana) cujus stirps ♂ sola nota est, ex speciminibus nostris characteres ostendit *Berardiæ*, ubi in Prodromo melius collocata fuit, nec *Adenophædræ*.

134. **Caryodendron**, *Karst. Fl. Colomb.* i. 91, *t.* 45. (Centrodiscus, *Muell. Arg. in Mart. Fl. Bras.* xi. ii. 325, *t.* 102.)—Flores dioici, apetali. Fl. ♂: Calycis lobi 3, lati, valvati. Stamina 4–6, circa discum crassum latum affixa, addito interdum uno in centro disci v. receptaculi, filamentis liberis; antheræ ovoideæ, dorsifixæ, loculis contiguis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀ ignoti, et fructus a nobis non visus. Sepala sub fructu (ex *Karst.*) 5–6, imbricata, parum accreta, persistentia. Discus annularis. Fructus majusculus, ovoideo-globosus, endocarpio crasso duro, ex icone loculicide dehiscens, 3- (rarius 2- v. 4-) locularis. Semina in loculis solitaria, albuminosa; cotyledones latæ, planæ.—Arbores glabræ. Folia alterna, breviter petiolata, ampla, integerrima, subcoriacea, penninevia. Racemi ♂ terminales, longi, parce ramosi, floribus parvis secus rhachin crassiusculam glomerati, subsessiles. Racemi ♀ simplices. Semina magna edulia dicuntur.

Species 2, altera Columbiana a nobis non visa, altera Brasiliana. *Muell. Arg. in DC. Prod.* xv. ii. 765, *et in Fl. Bras. l. c.*

135. **Alchornea**, *Swartz, Prod.* 93; *Fl. Ind. Occid.* 1153, *t.* 24.—Flores dioici v. rarius monoici, apetali. Discus sæpius 0. Fl. ♂: Calyx in alabastro globosus, clausus, per anthesin valvatim 4- (rarius 3- v. 2-) partitus. Stamina 8 v. pauciora (rarius ∞), filamentis liberis v. sæpius basi brevissime in annulum v. columnam connatis; antheræ dorsifixæ, loculis distinctis parallelis v. leviter divergentibus basi sæpe liberis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Perianthii segmenta 3–6, sæpius 4, imbricata. Ovarium 2–3-loculare, rarissime casu 4-loculare; styli distincti, sæpius lineares, indivisi v. rarius 2-fidi; ovula in loculis solitaria. Capsula 2–3-dyma, in coccos 2-valves dissiliens, endocarpio crustaceo. Semina subglobosa, estrophiolata, testa crustacea; albumen carnosum; cotyledones latæ, planæ.—Arbores fruticesve indumento parco rarius molliter villoso. Folia alterna, integerrima v. dentata, penninevia v. basi 3–5-nervia, et sæpissime basi subtus 2–∞-glandulosa. Spicæ axillares v. laterales, ♂ tenues simplices v. paniculato-ramosæ, floribus parvis secus rhachin glomeratis; spicæ v. racemi ♀ simplices, floribus sub quaque bractea solitariis. Bracteæ utriusque sexus minutæ, sæpius inconspicuæ.

Species normales ad 30, regionum calidiorum utriusque orbis incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 899, *et in Mart. Fl. Bras.* xi. ii. 375, *t.* 56. *Juss. Euph. Tent. t.* 13. *Baill. Etud. Euph. t.* 20; *Adans.* xi. 175. In sectiones sequentes distribuuntur:—

1. *Eualchornea.* Stamina sæpius 6–8, filamentis basi in annulum connatis. Ovarium sæpissime 2-loculare, stylis elongatis indivisis. Species ad 18, una Africana, cæteræ Americanæ. *Pæpp. et Endl. Nov. Gen. et Sp. t.* 221. SCHOUSBŒA, *Schum. Beskr. Pl. Guin.* 449. HERMESIA, *Humb. et*

Bonpl. in Willd. Spec. iv. 809; *Pl. Æquin. t.* 46. *A. sidæfolia*, Klotzsch, a Muell. Arg. pro sectione propria (*Sidalchornea*) separatur ob ovaria 3-locularia cum stylis 2-fidis, quod rarissime at casu tantum in speciminibus typicis Selloanis invenimus, et *A. pycnogyne*, Muell. Arg. in Mart. Fl. Bras. in *Eualchornea* collocata, est certe eadem species.

2. *Cladodes.* Stamina *Eualchorneæ*. Ovarium 3-loculare, stylis indivisis quam in *Eualchornea* sæpius brevioribus. Folia penninvenia, exstipellata. Species 5, Asiaticæ et Africanæ. CLADODES, *Lour. Fl. Cochinch.* 574.

3. *Aparisthmium.* Stamina sæpius 3–4, filamentis basi breviter connatis. Ovarium 3-loculare, stylis breviusculis indivisis v. apice retusis. Folia pennivenia, petiolo apice ut in *Stipellaria* sæpius 2-stipellato. Species 1, Americana. *A. Juss. Euph. Tent. t.* 13 (*Conceveibum cordatum*). APARISTHMIUM, *Endl. Gen. Pl.* 1112.

4. *Stipellaria.* Stamina *Eualchorneæ*. Ovarium 3- v. rarius 4-loculare, stylis sæpius longis indivisis. Folia basi 3–5-nervia, petiolo apice 2-stipellato. Species 5, Asiaticæ. STIPELLARIA, *Benth. in Hook. Kew Journ.* vi. 2. BLEEKERIA, *Miq. Fl. Ind. Bat.* i. ii. 407.

5. *Lautembergia.* Stamina *Eualchorneæ*. Ovarium 3-loculare, stylis 2-partitis. Folia pennivenia. Species 1, Madagascariensis. LAUTEMBERGIA, *Baill. Etud. Euph.* 451 (DIDEROTIA, *Baill. Adans.* i. 274).

6. *Orfilea.* Species 1, Madagascariensis a *Lautembergia* ex descr. distincta glandulis in fl. ♀ perianthii segmentis alternis. ORFILEA, *Baill. Etud. Euph.* 452.

7? *Cœlebogyne.* Fl. ♂ *Eualchorneæ* v. *Cladodis*. Calyx ♀ apertus, late sinuato-4-lobus. Styli breves, lati, complanati, patentissimi. Folia pennivenia, angulato-lobata, lobis spinescentibus. Species Australiana, quarum stirps ♀ in hortis nostris diu culta absque mare fertilis. CŒLEBOGYNE, *J. Sm. in Trans. Linn. Soc.* xviii. 509, *t.* 36. An melius pro genere proprio retinenda? Illi addidit Baillon, Adansonia, vi. 321, Benth. Fl. Austral. vi. 137, speciem ut videtur affinem pariter Australianam, sed stylis erectis parum diversam et floribus ♂ ignotis adhuc quodammodo dubiam.

Muell. Arg. in Prodromo sectionibus *Alchorneæ* addidit genera 2 sequentia polyandra, nobis adhuc non satis nota, sed ex habitu et characteribus datis vix non ad gradum genericum restituenda.

WETRIA, *Baill. Etud. Euph.* 409 (PSEUDOTREWIA, *Miq. Fl. Ind. Bat.* i. ii. 414). Antheræ ad 30. Styli longi, filiformes, basi longiuscule connati, superne 2-partiti. Species 2, Archipelagi Malayani. Ex his specimina ♀ unius tantum vidimus, spica longissima tenui floribus remotis, ♂ nulla nobis adsunt.

PALISSYA, *Baill. Etud. Euph.* 502. Spicæ ♂ breves, amentiformes. Stamina numerosa, parva, disco crasso elevato piloso imposita, filamentis brevibus liberis. Antheræ parvæ, loculis in connectivo crasso distinctis, primum parallelis demum divaricatis. Inflorescentia ♀ in speciminibus nostris imperfecta. Discus hypogynus cupuliformis. Styli 2-partiti. Folia pennivenia. Species 1, Madagascariensis. Nec habitu nec characteribus *Alchorneæ* convenire videtur, et verisimiliter in flore Madagascariensi ad specimina meliora elaboranda iterum separabitur.

Caturus scandens, Lour., a Muell. Arg. in Prodromo ad *Alchorneam* relatus, rectius a Bureau et Seemann ad *Malaisiam* inter *Urticeas* transfertur.

136. **Alchorneopsis,** *Muell. Arg. in Linnæa* xxxiv. 156, *in DC. Prod.* xv. ii. 764, *et in Mart. Fl. Bras.* xi. ii. 327, *t.* 48.—Flores dioici, apetali. Discus 0. Fl. ♂: Calyx in alabastro globosus, clausus, per anthesin valvatim 4-partitus. Stamina 5–6, receptaculo piloso affixa, filamentis liberis apice brevissime inflexis; antheræ erectæ, subbasifixæ, loculis distinctis parallelis connectivo crasso glanduliformi semiadnatis pendulis longitudinaliter dehiscentibus. Ovarii rudimentum glabrum, 3-partitum. Fl. ♀: Calyx alte 4-fidus (imbricatus?), sub ovario patens. Ovarium 3-loculare; styli 3, breves, recurvo-patentes, indivisi; ovula in loculis solitaria. Capsula junior subglobosa, carnosula, matura ignota.—Arbores proceræ, habitu et foliis *Alchorneæ glandulosæ* simillimæ, inflorescentia excepta glabræ. Folia alterna, longiuscule petiolata, integerrima v. vix sinuato-dentata, chartacea, 3-nervia, subtus in axillis nervorum glandulifera. Racemi graciles, axillares v. infrafoliacei, ♂ interdum fasciculati, ♀ pauciores. Flores breviter pedicellati v. subsessiles, ♂ minuti, secus rhachin fasciculati, sub quaque bractea pauci, ♀ sub bracteis solitarii.

Species v. varietates 2, Brasiliæ borealis et Guianæ incolæ. Flores ♀ in sola varietate Guianensi noti.

137. **Lepidoturus**, *Baill. Étud. Euph.* 448.—Flores dioici, apetali. Fl. ♂: Calyx membranaceus, in alabastro globosus, clausus, per anthesin valvatim 4- rarius 3- v. 5-partitus. Discus 0. Stamina 8, filamentis ima basi subconnatis; antheræ oblongæ, erectæ, dorsifixæ, loculis undique contiguis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Sepala 3–5, inæqualia. Discus 0, v. e glandulis 3–4. Ovarium 3-loculare; styli primum connati, demum a basi liberi, plus minus bifidi v. indivisi; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves dissiliens. Semina strophiolata (*Muell. Arg.*); albumen carnosum; cotyledones latæ, planæ.—Frutices glabri. Folia alterna, petiolata, membranacea, remote dentata, basi 3–5-nervia. Spicæ ♂ amentiformes, in ramis annotinis v. vetustioribus sessiles, bracteis latis concavis subimbricatis diu persistentibus flores solitarios sessiles v. plures breviter pedicellatos foventibus; ♀ paucifloræ.

Species 4, quarum 3 ex Africa tropica, una e Madagascaria. *Muell. Arg. in DC. Prod.* xv. ii. 892. *Benth. in Hook. Ic. Pl. t.* 1297. Calyces ♂ in specie typica Madagascariensi glabri sub bractea solitarii sessilesque dicuntur, in *L. occidentali* uti in *L. laxifloro* fasciculati sunt, breviter pedicellati et hispiduli. Genus a Baillono ad *Alchorneam* relatum eique valde affine, differt imprimis inflorescentia mascula, et fide Muelleri seminibus strophiolatis.

138. **Conceveiba**, *Aubl. Pl. Gui.* 923, *t.* 353.—Flores dioici, apetali. Discus 0. Fl. ♂: Calyx membranaceus, in alabastro ovoideus, clausus, per anthesin valvatim 3–4-partitus. Stamina ∞ (ultra 30), receptaculo convexo affixa, exteriora nonnulla (5–10 v. rarius 0?) filamentis brevibus erectis, interiora numerosa filamentis elongatis plus minus flexuosis; antheræ erectæ, loculis parvulis subparallelis connectivo lato separatis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx 5–6-partitus, segmentis angustis rigidulis imbricatis; glandulæ totidem magnæ, extus adnatæ, segmentis alternæ. Ovarium 2-loculare; styli basi breviter nunc brevissime connati, superne recurvo-patentes, crassi, retusi v. sub 2-fidi; ovula in loculis solitaria. Capsula magna, globosa, lævis v. 3-costata, in coccos 2-valves dissiliens, pericarpio subsuberoso. Semina a dorso compressiuscula, testa crustacea lævi; albumen carnosum, siccitate durum; cotyledones latæ, planæ.—Arbores glabræ. Folia alterna v. hinc inde subopposita, petiolata, ampla, integerrima v. remote dentata, rigide membranacea v. demum coriacea, penninervia, venis secundariis transversis, venulis reticulatis. Paniculæ terminales, ♂ amplæ, floribus parvis secus ramulos tenues divaricatos glomeratis, ♀ simpliciores, floribus secus rhachin simplicem crassam seu ramulos breves sparsis, pedicello brevi crasso basi glanduloso-bracteato fultis.

Inter species a *Muell. Arg. in DC. Prod.* xv. ii. 896, *et in Mart. Fl. Bras.* 371, *t.* 55, enumeratas, 3 genuinæ sunt, Brasiliæ borealis et Guianæ incolæ (*C. guianensis*, Aubl., *C. Hostmanni*, Benth., et *C. latifolia*, Benth.). *C. megalophylla*, Muell. Arg., et *C. Martiana*, Baill., jam in Fl. Bras. ad *Alchorneam* transferuntur. *C. africana*, Muell. Arg., est *Neoboutoniæ* species. *C. terminalis*, Muell. Arg. (*Gavarretia*, Baill.), ex solis speciminibus ♀ imperfecte nota est, quæ nec inflorescentiam nec perianthium *Conceveibæ* ostendunt.

139. **Gavarretia**, *Baill. Adans.* i. 185, *t.* 7.—Flores dioici? apetali, ♂ ignoti. Fl. ♀: Calyx campanulatus, truncatus v. obscure sinuato-dentatus, eglandulosus. Discus 0. Ovarium 2-loculare; styli basi breviter connati, 2-partiti v. 2–4-fidi, ramis recurvo-patentibus breviter v. longiuscule papillosis; ovula in loculis solitaria. Fructus . . .—Arbusculæ, inflorescentia minute tomentella excepta glabræ. Folia alterna, breviter petiolata, ampla, integerrima v. obscure dentata, rigide coriacea, penninervia, venis primariis subtus elevatis. Spicæ terminales, simplices, longiusculæ, apicem versus dense v. interrupte ∞-floræ. Flores singuli ad axillas bractearum parvarum 2-glandulosarum sessiles.

Species 2, Brasiliæ borealis incolæ. Genus floribus ♂ et fructu ignotis quodammodo dubium remanet. Muell. Arg. in DC. Prod. xv. ii. 897, et in Mart. Fl. Bras. xi. ii. 372, ad sectionem *Conceveibæ* reducit, sed inflorescentia et flores ♀ notis essentialibus differunt.

140. **Lasiocroton**, *Griseb. Fl. Brit. W. Ind.* 46.—Flores dioici, apetali. Fl. ♂ (in alabastris nimis juvenilibus observati): Calyx ovoideus, clausus (demum valvatim 5-fidus ?). Discus 0. Stamina ∞ (10 v. plura), filamentis liberis; antherarum loculi distincti, contigui, paralleli, longitudinaliter dehiscentes. Ovarii rudimentum 0. Fl. ♀: Calyx parvus, alte 5-fidus, sub ovario patens. Discus hypogynus crassus, pulvinatus, integer. Ovarium 3-loculare; styli brevissimi, crassi, patentes, retusi v. brevissime 2-lobi fimbriatique (si in speciminibus perfecti); ovula in loculis solitaria. Capsula tridyma, tomentosa, in coccos 2-valves dissiliens. Semina globosa, lævia, matura non visa.—Frutex subferrugineo-tomentosus, habitu *Malloti*. Folia alterna, mollia, cordata, vix denticulata, basi 3–5-nervia. Racemi in axillis superioribus solitarii, ♂ breves, sessiles, floribus dense confertis (forte demum elongandi ?), ♀ longi, laxi, floribus pluribus distantibus pedicellatis, inflorescentia tota fulvo-tomentosa.

Species 1, Jamaicensis, *Muell. Arg. in DC. Prod.* xv. ii. 955. Species altera sectionem *Argyrocroton* Griseb. formans, e Cuba, *Wright n.* 1993, nec a Muellero nec a nobis visa, ex charactere dato a genere longe aliena est, forte ad *Pseudocrotonem* referenda.

141. **Neoboutonia**, *Muell. Arg. in Seem. Journ. Bot.* ii. 336, *et in DC. Prod.* xv. ii. 892.—Flores dioici, apetali. Discus obscurus. Fl. ♂: Calyx membranaceus, in alabastro globosus, clausus, per anthesin valvatim 2-partitus. Stamina ∞ (16–30), receptaculo convexo affixa, filamentis brevissimis liberis; antheræ oblongæ, erectæ, basifixæ, connectivo interdum glandula minuta coronato, loculis adnatis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx alte 5-fidus, lobis imbricatis. Ovarium 3-loculare; styli breves, distincti, rigidi, 2-partiti, recurvo-patentes; ovula in loculis solitaria. Capsula 3-cocca ?—Frutices v. arbores, pilis seu pulvinis minutis stellatis conspersi et interdum pilis rigidioribus hirsuti. Folia alterna, petiolata, ample orbiculari-cordata, vix undulato-crenata, basi 7–9-nervia et transversim venosa. Paniculæ ♂ in summis axillis paniculam amplam terminalem efficiunt, floribus minimis secus ramulos tenues glomeratis subsessilibus; panicula ♀ brevior, floribus majoribus secus ramulos breves sub quaque bractea solitariis. Bracteæ utriusque sexus minimæ.

Species 2, Africæ tropicæ incolæ. Speciei typicæ *N. africanæ*, Muell. Arg. *Benth. in Hook. Ic. Pl.* *t.* 1298, 1299, addimus *Conceveibam africanam*, Muell. Arg. in DC. Prod. xv. ii. 897 (*N. Mannii* nob.), cujus specimina ♂ sola nota. Habitu, foliis, perianthio et præsertim antheris omnino *Neoboutoniæ* nec *Conceveibæ* convenit.

142. **Cœlodiscus**, *Baill. Etud. Euph.* 293.—Flores dioici, apetali. Discus 0. Fl. ♂: Calyx in alabastro clausus, per anthesin valvatim 3-partitus. Stamina ∞ (ultra 20) circa discum latum supra planum v. concavum interdum elevatum ∞-seriatim affixa, filamentis liberis erectis; antheræ parvæ, erectæ, ovatæ, loculis parallelis connectivo crassiusculo sejunctis v. fere contiguis, longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx 3-partitus, segmentis angustis. Ovarium 3-loculare; styli erecti, crassi, indivisi, dorso tomentosi; ovula in loculis solitaria. Capsula tridyma, ferrugineo-tomentosa v. molliter echinata, in coccos 2-valves dissiliens. Semina subglobosa; albumen carnosum; cotyledones planæ, latæ.—Frutices tomento stellato ferruginei. Folia opposita v. (in specie nobis ignota) alterna, petiolata, subcordata, sæpius remote glanduloso-dentata, basi 5–7-nervia. Racemi axillares. Flores ♂ secus rhachin longiusculam sub quaque bractea glomerati, ♀ ad apicem rhacheos brevis pauci sub quaque bractea solitarii.

Species 4, Indiæ orientalis et Archipelagi Malayani incolæ, quarum duæ solæ typicæ e Penang cum nova Javensi nobis notæ. *Muell. Arg. in DC. Prod.* xv. ii. 758. *Kurz, For. Fl. Brit. Burm.* ii. 392.

Genus et habitu et characteribus *Malloto* valde affine, vix differt receptaculo disciformi in fl. ♂ inter stamina plano v. elevato. Stamina ex Baill. in *C. montano*, ex Muell. Arg. in *C. Thunbergiano* ∞-adelpha, quod in *C. montano* non invenimus, etsi in alabastro filamenta arcte appressa exterioribus jam cæteris majoribus fasciculata appareant; in flore aperto omnia a basi distincta.

143. **Podadenia**, *Thwaites, Enum. Pl. Zeyl.* 273.—Flores dioici, apetali. Discus 0. Fl. ♂: Calyx in alabastro clausus, ovoideo-globosus, acuminatus, per anthesin valvatim 3–4-partitus. Stamina numerosa, receptaculo convexo affixa, filamentis liberis glandulis parvis intermixtis; antherarum loculi distincti, a connectivo prominente acuminato penduli, longitudinaliter dehiscentes. Ovarii rudimentum 0. Fl. ♀: Sepala 4–5, imbricata. Staminodia ∞ (*Muell. Arg.*), in speciminibus examinatis non invenimus. Ovarium 3-loculare; styli basi breviter connati, superne elongati, recurvo-patentes, crassiusculi, indivisi; ovula in loculis solitaria. Capsula carnosa, subglobosa, indehiscens, glandulis magnis stipitatis densissime echinata. Semina abortu 1–2, majuscula, oblonga, in speciminibus nostris immatura; testa (*ex Thw.*) ossea, arillo copioso carnoso (testæ strata exteriore?) vestita; albumen copiosum.—Arbor ingens, ferrugineo-villosa. Folia alterna, petiolata, ampla, penninervia. Racemi ad apices ramorum paniculati. Flores pedicellati, ♂ secus ramos fasciculati, in fasciculis numerosi; ♀ sub quaque bractea solitarii. Glandulæ stipitatæ fructus jam in ovario sub anthesi apparent adhuc sessiles v. breviter stipitatæ.

Species 1, Zeylanica. *Muell. Arg. in DC. Prod.* xv. ii. 791. *Bedd. Fl. Sylv. t.* 282. Genus a Baillono ad *Mallotum* reducitur, nobis bene distinctum videtur.

144. **Trewia**, *Linn. Gen. n.* 1239. (Rottlera, *Willd. in Gætt. Diar. Hist. Nat.* i. 8, t. 3, *ex ejusd. Sp. Pl.* iv. 834, *non Roxb.*)—Flores dioici, apetali. Discus 0. Fl. ♂: Calyx in alabastro globosus, clausus, per anthesin valvatim 3–4-partitus, segmentis latis concavis sæpius reflexis. Stamina ∞ (ultra 50), receptaculo convexo crassiusculo affixa, filamentis liberis; antheræ prope basin dorsifixæ, oblongæ, loculis contiguis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Sepala 3–5, latiuscula, leviter imbricata, caducissima. Ovarium 2–4-loculare; styli basi connati, superne longe lineares, teretes, indivisi, undique papilloso-hirti; ovula in loculis solitaria. Fructus 2–4-locularis, indehiscens v. loculicide dehiscens, pericarpio plus minus carnoso, endocarpio tenuiter crustaceo. Semina ovoidea, testa dura; albumen carnosum; cotyledones planæ, latæ.—Arbores sæpe a basi ramosæ, ligno molli. Folia opposita, petiolata, lata, integerrima, 3–5-nervia. Racemi ♂ laterales, ante folia evoluti, longi, laxi, floribus majusculis breviter pedicellatis sub quaque bractea solitariis. Flores ♀ in pedunculo axillari solitarii v. ∞ racemosi.

Species 2, Indiæ orientalis incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 953. *A. Juss. Euph. Tent. t.* 9, *f.* 29 c (*Rottlera*). *Baill. Etud. Euph. t.* 18. *Wight, Ic. t.* 1870, 1871. *Klotzsch in Pr. Waldem. Reise, Bot. t.* 23. *Bedd. Fl. Sylv. t.* 281.

In specie typica per totam Indiam vulgatissima, pedunculi ♀ longi 1-flori v. rarius hinc inde 2–3-flori, fructus globosus pollicem fere diametro, 4- rarius 3-locularis, pericarpio crasso carnoso; ramuli novelli inflorescentia et folia sæpius plus minus tomentosa. Species altera (*T. polycarpa* nobis) peninsulæ Indiæ Orientalis, cujus flores ♂ non vidimus, glabrior est, racemis ♀ ∞-floris, ovario 2-loculari, fructu ad 4 lin. lato, pericarpio tenuiore loculicide 2-valvi. Huc pertinent specimina ♀ in Wight. Ic. t. 1871, et Bedd. Fl. Sylv. t. 281, delineata. Tetragastris, *Gærtn. Fruct.* ii. 130, *t.* 109, ex fructu quodam originis incertæ in seminario horti Amstelodamensis servato illustrata, a Willdenowio ad *Trewiam* relata fuit, quem secuti sunt Baillon et Muell. Argoviensis, sed descriptio et icon Gærtneri nequaquam conveniunt, et *Tetragastris* jam a Kunthio Ann. Sc. Nat. ser. 1, ii. 353, ut videtur recto jure, ad *Hedwigiam* Sw. refertur (cfr. supra i. 326). Lindley, Introd. Nat. Syst. ed. 2, 174, discordia descriptionum fructus commotus, et nota Kunthii prætermissa, ordinem proprium proposuit (Trewiaceæ), quem tamen postea, Veg. Kingd. 275, neglexit.

145. **Coccoceras**, *Miq. Fl. Ind. Bat. Suppl.* 455. Flores dioici, apetali. Discus 0. Fl. ♂: Calyx in alabastro globosus, clausus, per anthesin valvatim 3–4-partitus. Stamina ∞ (15–20), receptaculo parum elevato imposita, filamentis liberis; antheræ prope basin dorsifixæ, loculis distinctis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx 5-partitus, segmentis lanceolatis leviter imbricatis. Ovarium 3-loculare; styli basi vix connati, patentes, papilloso-hispidi v. fere laciniati; ovula in loculis solitaria. Capsula depressa, duriuscula, angulis 3 nunc costiformibus prominulis nunc in appendices corniformes horizontaliter productis, demum loculicide 3-valvis. Semina

subglobosa v. compressiuscula, lævia, strophiolata, testa crustacea; embryo . . .—Arbores habitu *Malloti*. Folia alterna, petiolata, integerrima v. sinuato-dentata, basi 3-nervia, pennivenia et transversim venulosa. Racemi elongati, axillares v. subterminales, ♂ juniores amentiformes, floribus numerosis secus rhachin glomeratis fere sessilibus; ♀ laxi, pedicellis longiusculis secus rhachin dissitis.

Species 3, Archipelagi et Peninsulæ Malayanæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 950. Genus *Malloto* valde affine, differt imprimis fructu et inflorescentia ♀.

146. **Mallotus,** *Lour. Fl. Cochinch.* 635. (Rottlera, *Roxb. Corom. Pl.* ii. 36, *t.* 168.)—Flores dioici v. rarius monoici, apetali. Discus 0 v. in fl. ♀ evolutus. Fl. ♂: Calyx in alabastro globosus, clausus, per anthesin valvatim 3–4-partitus. Stamina ∞ (30–300), receptaculo parum elevato imposita, filamentis liberis; antheræ prope basin dorsifixæ, loculis distinctis parallelis connectivo lato separatis v. connectivo parvi longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx alte v. breviter 3–5-lobus v. subspathaceus, lobis valvatis v. vix imbricatis, v. 5- (rarius ∞-?) partitus segmentis imbricatis. Ovarium 3-loculare v. rarissime 2- v. 4-loculare; styli distincti v. basi connati, recurvo-patentes, indivisi, intus fimbriati v. prominenter papillosi; ovula in loculis solitaria. Capsula globosa v. tridyma, rarius didyma, in coccos 2-valves dissiliens. Semina ovoidea v. globosa, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Arbores fruticesve. Folia alterna v. in paucis speciebus opposita, petiolata, lata, sæpe ampla, integerrima dentata v. late 3-loba, interdum peltata, basi 3–7-nervia v. undique pennivenia, prope basin supra sæpe 2-glandulosa. Spicæ simplices v. paniculato-ramosæ, axillares v. ad apices ramorum paniculatæ. Flores ♂ sæpius parvi, breviter pedicellati, secus rhachin glomerulati, ♀ pauciores, sub quaque bractea solitarii, breviter v. longius pedicellati. Capsulæ tomentosæ glanduloso-lepidotæ v. processibus mollibus sparsim v. densissime echinatæ.

Species ad 70, inter tropicos orbis veteris vigentes, in India orientali et Archipelago Malayano usque ad Australiam numerosæ, in Africa pauciores. *Muell. Arg. in DC. Prod.* xv. ii. 956. *Benth. Fl. Austral.* vi. 139. *Kurz, For. Fl. Brit. Burm.* ii. 379. *Bak. Fl. Maurit.* 319. *Thunb. Fl. Jap. t.* 28, 29 (*Croton*). *Sieb. et Zucc. Fl. Jap. t.* 79 (*Rottlera*). *Wight, Ic. t.* 1873 (*Rottlera*) *et t.* 1886 (*Claoxylon*). *Bedd. Fl. Sylv. t.* 289; *Ic. Pl. Ind. Or. t.* 232.

Genus tam habitu quam inflorescentia et etiam floribus sat polymorphum, sed characteres e floribus deducti male cum habitu conveniunt, et sectiones nullæ bonæ adhuc propositæ. Interea genera sequentia, á variis auctoribus ad species singulas stabilita a Muellero ad *Mallotum* reducta sunt.

Echinus, *Lour. Fl. Cochinch.* 633, eodem tempore ac *Mallotus* editus, a Baillono Adans. vi. huic male substituitur. Si revera *Echinus trisulcus*, Lour., ut docet Mueller, eandem plantam refert ac *Mallotus chinensis* (quod dubitamus), pessime descripta fuit, nam calyx ♂ squamiformis dicitur, ovatus, acutus, incurvus, terminatus laciniis variis inæqualibus linearibus, et pistillum 2-merum. Character autem Loureirianus *Malloti* sui optime *Rottleram*, Roxb., refert.

Boutonia, *Boj. Hort. Maurit.* 282 (Cordemoya, *Baill. Adans.* i. 255), quoad speciem Bojerianam alternifoliam a *Mallotis* typicis nequaquam differre videtur. Species altera oppositifolia a Baill. Etud. Euph. 401 addita, nobis ignota est.

Adisca, *Blume, Bijdr.* 609, species plures includit floribus monoicis nec dioicis, cæterum omnino normales.

Melanolepis, *Reichb. et Zoll. in Linnæa* xxviii. 324, est *M. moluccanus*, Muell. Arg., ab auctoribus pro genere distinctus ob discum floris ♀ evolutum et pistillum 2-merum. Species plures in eadem sectione disco ♀ evoluto a Muell. Arg. coacervatæ valde differunt habitu, pistillo 3–4-mero, &c. Sub *M. Porteriano* species 2 includuntur quoad flores ♂ (qui soli Muellero noti fuerunt) simillimæ, n. 9093, Wall. Cat. Herb. Ind., stylorum columna elongata, et n. 9094, Wall. l.c. stylis a basi distinctis. Stylanthus, sectio v. genus, Reichb. et Zoll. in Linnæa xxviii. 312, stylo columnari distincta, nequaquam retinenda.

Blumeodendron, *Kurz, For. Fl. Brit. Burm.* ii. 391, est *Elateriospermum Tokbrai*, Bl., arbor foliis coriaceis plerisque 2–3-natim verticillatis insignis, a Muellero ad sectionem *Malloti* reducitur, capsula magna extus fibroso-carnosa intus lignosa, seminibus testa extus carnosa spurie arillatis.

Axenfeldia, *Baill. Etud. Euph.* 419, est *M. muricatus* Muell. Arg., foliis plerisque oppositis cujusve paris inæqualibus et inflorescentia *Claoxyli*, quapropter sub *Claoxylo* delineatur in Wight,

Ic. t. 1886. HANCEA, *Seem. Bot. Her.* 409, *t.* 96, est *M. Hookerianus*, Muell. Arg., foliis pariter oppositis altero tamen nano stipuliformi et inflorescentia simpliciore, floribus ♂ sub quaque bractea solitariis. Characteres cæteri omnino *Malloti*. Spicæ ♂ amentiformes a Baillono descriptæ et a Wightio delineatæ ex Muell. Arg. monstruosæ sunt, in speciminibus nostris non obviæ. PLAGIANTHERA, *Reichb. et Zoll. in Linnæa* xxviii. 321 (ECHINOCROTON, *F. Muell. Fragm. Phyt. Austral.* i. 31), includit species nonnullas oppositifolias antherarum loculis connectivo latiusculo separatis.

Mallotus barbatus, Muell. Arg., *M. macrostachyus*, Muell. Arg., speciesque aliæ paucæ in sectionibus diversibus dispersæ, a cæteris differunt capsulis stricte globosis nec tridymis.]

Mappa capensis, Baill., ob antherarum formam a Muell. Arg. ad *Mallotum* translata, differt habitu inflorescentia, staminibus 2–3, floribus ♀ et fructu, et in his omnibus *Macarangæ* (*Eumacarangæ*) convenit.

Mallotus diadenus, Muell. Arg. (*Melanolepis*, Miq.), floribus fructuque ignotis, folia peculiaria et glandulas *Endospermi chinensis* ostendit, et est verisimiliter ei congener.

DIPLOCHLAMYS, *Muell. Arg. in Flora*, 1864, 539, *et in DC. Prod.* xv. ii. 1023, a *Malloto* non differt nisi floris ♀ calyce 8–10-partito, segmentis imbricatis sub-2-seriatis. Species unica Malaccensis a Baillono Hist. Pl. v. 196, bene sub *Malloto* inclusa.

Mallotus subpeltatus, Muell. Arg. (*Rottlera rhynchophylla*, Miq.), insignis est spicis axillaribus v. lateralibus tam ♂ quam ♀ brevissimis ad flores in ♂ sæpe solitarios in ♀ 2–3 in caule subsessilibus reductis, stylis longissimis tenuibus. Stamina numerosa in receptaculo convexo dense conferta filamentis liberis omnino *Malloti*.

147. **Cleidion**, *Blume, Bijdr.* 612. (Rodia, *Casar. Nov. Stirp. Bras. Dec.* 51. Psilostachys, *Turcz. in Bull. Soc. Imp. Nat. Mosc.* 1843, 58. Lasiostyles, *Presl, Bot. Bem.* 149. Tetraglossa, *Bedd. in Madras Journ. Sc. ser.* 2, vi. 70.)—Flores monoici v. dioici, apetali. Fl. ♂: Calyx in alabastro globosus, clausus, per anthesin valvatim 3–4-partitus. Stamina ∞ (ultra 20) receptaculo convexo v. conico dense conferta, filamentis liberis; antheræ dorsifixæ, connectivo latiusculo sæpius breviter ultra loculos producto, loculis lateralibus transverse didymis, quasi 4-loculares, locellis cujusve loculi superpositis demum confluentibus. Ovarii rudimentum 0. Fl. ♀: Sepala 3–4, rarius 5, imbricata. Ovarium 2-3-loculare; styli tenues, basi sæpius breviter connati, alte 2-fidi, ramis longis filiformibus; ovula in loculis solitaria. Capsula majuscula v. parvula, 2-3-dyma, in coccos 2-valves dissiliens v. abortu 1-cocca. Semina subglobosa, testa coriacea; albumen carnosum; cotyledones planæ, latæ.—Arbores glabræ. Folia alterna, petiolata, ampla, sæpius dentata, pennivenia. Racemi ♂ axillares, elongati, floribus parvulis sparsis v. glomeratis. Flores ♀ in pedunculo longo axillari solitarii v. gemini, inter se distantes. Capsulæ læves.

Species ad 13, Americæ, Africæ, et Asiæ tropicæ et insularum maris Pacifici incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 984, *et in Mart. Fl. Bras.* xi. ii. 418, *t.* 59. *Baill. Adans.* xi. 129; *Etud. Euph. t.* 9 (*Cleidion*) *et t.* 21 (*Redia*). *Bedd. Fl. Sylv. t.* 272.

Species Asiatica pro sectione distincta a cæteris separatur ob pistillum 2-merum nec 3-merum, variat tamen sæpe etiam 3-merum. *C. verticillatum*, Baill., racemis ♂ capituliformibus floribusque ♀ terminalibus sessilibus v. brevissime pedunculatis vix congener videtur. *C. Vielliardii* var. *vitiensis*, Muell. Arg. (*Macaranga leptostachya*, Muell. Arg.), rite ad *Cleidion* refertur, sed nobis a forma typica Novo-Caledonica specifice distinctissimum videtur. *C. ulmifolium*, Muell. Arg., ex ins. Loo-Choo, referenda videtur ad *Macarangam*, cujus antheras et stylos ostendit. Speciem novam huic generi affinem, legit Pearce in Monterico (Boliviæ ?), cujus specimina ♂ tantum nobis adsunt, differt caule alte scandente, foliis integerrimis 3-nerviis, sed calyx valvatim 4-partitus et stamina ad 20 antheris 4-locellatis omnino *Cleidii*; alteram legit Tate in Nicaragua pariter dubiam floribus ♀ ignotis; in stirpe ♂ habitus calyx et stamina ad 20 *Cleidii*, sed antherarum loculi indivisi. Speciem Africanam legit Mann in montibus Cameroon a *C. gabonico*, Baill., forte distinctam.

148. **Macaranga**, *Thou. Gen. Nov. Madag.* 26.—Flores dioici v. rarius monoici, apetali. Discus 0. Fl. ♂: Calyx in alabastro globosus, clausus, per anthesin valvatim 3-4-partitus. Stamina nunc pauca (1–3), nunc sæpius ∞ (10–30), filamentis brevibus liberis; antheræ terminales, breves, ad normam loculis didymis v. 2-locellatis quasi 4-loculares, 4-valves, rarius plures v. omnes 3-locellatæ 3-valves, v. (in *M. capensi*) loculis ut in *Malloto* indivisis.

Ovarii rudimentum 0. Fl. ♀: Calyx truncatus v. breviter dentatus, per anthesin late cupulatus v. oblique spathaceus. Ovarium 2-3-loculare v. abortu 1-loculare, rarissime 3-loculare v. (in *Pachystemone*) 4-6-loculare; styli sæpius breves, crassiusculi, erecti v. subpatentes, indivisi, basi breviter connati v. liberi, rarius elongati tenuesque v. in massam brevem obtusam v. disciformem connati; ovula in loculis solitaria. Capsula in coccos 2-valves dissiliens, v. si 1-locularis tardius v. vix dehiscens. Semina globosa, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Arbores fruticesve. Folia alterna, petiolata, sæpe ampla, integerrima dentata v. 4-loba, basi sæpe 3-7-nervia et peltata v. late cordata, interdum pennivenia basi obtusa v. acuta. Spicæ v. racemi axillares v. laterales, simplices v. subramosi v. ad apices ramorum paniculati. Flores ♂ intra bracteas ∞, parvi, secus rhachin glomerati, ♀ sub quaque bractea pauci v. solitarii. Bracteæ sæpe flores amplectentes, integræ v. fimbriatæ.

Species ad 80, Asiæ et Africæ tropicæ et australis, insularum Mascarensium v. maris Pacifici et Australiæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 988. *Benth. Fl. Austral.* vi. 144. *Kurz, For. Fl. Brit. Burm.* ii. 386.

Genus *Malloto* affine, quoad characteres polymorphum et limitibus nullis certis ab illo separatum, etsi charactere uno alterove et habitu haud difficile distinguendum. In sectiones sequentes apud auctores nonnullos genera propria dividitur:—

1. *Eumacaranga.* Stamina ∞, antheris ad normam 4-valvibus. Pistillum sæpissime ad carpellum unicum perfectum reductum, capsula 1-cocca globosa. Folia et styli varia. *Wight, Ic. t.* 685 (*Urtica*, Roxb.), 817 (*Mappa*), 1883, 1949. *Bedd. Fl. Sylv. t.* 287. Mecostylis, *Kurz ex Teijsm. et Binnend. in Batav. Natuurk. Tijdschr.* xxvii. 44.

2. *Mappa.* Stamina sæpius ∞, antheris omnibus ad normam 4-valvibus v. paucis 3-valvibus intermixtis. Pistillum sæpissime 2-merum, rarius hinc inde 3-merum. Folia et styli varia. *Wight, Ic. t.* 1884 (*Claoxylon*). Mappa, *A. Juss. Euph. Tent.* 44, *t.* 14. *Wight, Ic. t.* 816.

Sectio *Dimorphanthera*, Muell. Arg., verisimiliter in *Mappa* includenda. Species 2 continet inter se sat dissimiles, foliis non peltatis, stipulis in unam oppositifoliam caducissimam connatis. Specimina ♀ tantum vidimus, characteribus omnino *Mappæ*. Flores ♂ in una adhuc ignoti, in altera ex Muell. Arg. antheræ 3-valves cum 4-valvibus mixtæ.

3. *Pachystemon.* Flores ♂ minimi, clavati, intra bracteam densissime glomerati, staminibus 1-2, antheris 3-valvibus. Ovarium 4-6-loculare; styli breves, erecti, basi connati. Capsula depressa, supra plana sæpeque margine cornuta. Folia peltata, sæpe 3-loba. Pachystemon, *Blume, Bijdr.* 626. *Wight, Ic. t.* 1949. Sectio facile pro genere proprio admittenda. Habitu tamen *Mappis* peltatifoliis accedit.

Mappa capensis, Baill. (*Mallotus capensis*, Muell. Arg.), habitu, inflorescentia, floribus ♀ et fructu *Eumacarangæ* convenit. Stamina 2-3 fere *Pachystemonis*, etsi antheræ stricte 2-loculares *Malloti*.

Mappa macrophylla, A. Gray, e Samoa, est species a *Macaranga macrophylla*, Muell. Arg., e Fiji, calyce ♀ stylisque distinctissima. Flores ♂ utriusque nobis desunt.

149. **Ricinus,** *Linn. Gen. n.* 1085.—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx membranaceus, in alabastro globosus, per anthesin valvatim 3-5-partitus. Stamina numerosa (interdum usque ad 1000), filamentis repetito-ramosissimis conferta; antherarum loculi distincti, subglobosi, divaricati, separatim filamento affixi, longitudinaliter dehiscentes. Ovarii rudimentum 0. Fl. ♀: Calyx (sæpius an semper?) spathaceo-fissus, caducissimus. Ovarium 3-loculare; styli breves v. longiusculi, 2-fidi v. rarius indivisi, patentes, plus minus plumosi; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves dissiliens. Semina ovoidea, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Herba elata annua, v. in regionibus calidioribus frutex arborescens, glabra, sæpe glauca. Folia alterna, ampla, peltata, palmatim 7-∞-loba, lobis serratis. Racemi ad apices ramorum subpaniculati, floribus majusculis, superioribus ♂ confertis, inferioribus ♀ breviter pedicellatis. Capsulæ læves v. echinatæ.

Species 1, quoad capsulas et semina valde variabilis, originis probabiliter Africanæ, nunc per regiones calidiores utriusque orbis latissime dispersa, sæpe inquilina sed forte in America uti in Asia et Africa indigena. *Muell. Arg. in DC. Prod.* xv. ii. 1017, *et in Mart. Fl. Bras.* xi. ii. 420, *t.* 60. *Gærtn. Fruct. t.* 107. *Baill. Etud. Euph. t.* 10, 11. *Jacq. Ic. Rar. t.* 195, 196. *Hayne,*

Arzneig. x. *t.* 48. *Reichb. Iconogr. Exot. t.* 153 *ad* 155. *Nees, Gen. Fl. Germ.*; *Moench.* n. 33. *Sibth. Fl. Græc. t.* 952. *Bot. Mag. t.* 2209. *Andr. Bot. Rep. t.* 430.

150. **Homonoia**, *Lour. Fl. Cochinch.* 636. (Lumanaja, *Blanco, Fl. Filip.* 821. Haematospermum, *Wall. Cat. Herb. Ind. n.* 7953 *ad* 7955.)—Flores dioici v. rarius flores ♂ perpauci in racemo ♀, apetali. Discus 0. Fl. ♂: Calyx in alabastro globosus, clausus, per anthesin valvatim 3-partitus. Stamina numerosa; antheræ in filamentis repetitim ramosis dense confertæ, loculis subglobosis divaricatis in filamento sessilibus, connectivo obscuro. Ovarii rudimentum 0. Fl. ♀: Sepala 5–8, angusta, imbricata, inæqualia, caducissima. Ovarium 3-loculare; styli indivisi, patentes, papilloso-plumosi, vix basi connati: ovula in loculis solitaria. Capsula parva, globosa, in coccos 2-valves dissiliens, endocarpio haud crasso. Semina ovoidea, testa crustacea duriuscula extus tenuiter carnosa; albumen carnosum; cotyledones planæ, latæ.—Frutices in speciebus typicis virgato-ramosi, glabri v. puberuli. Folia alterna, angusta et integerrima v. brevia dentataque, subcoriacea, subtus plus minus glanduloso-lepidota. Spicæ axillares v. ad nodos defoliatos, utriusque sexus densifloræ v. abbreviatæ et paucifloræ. Capsulæ canopuberulæ, non echinatæ.

Species 3 v. 4, Indiæ orientalis et Archipelagi Malayani incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1022. *Wight, Ic. t.* 1868, 1869 (*Adelia*).

Spathiostemon, *Blume, Bijdr.* 621, species Javanica a nobis non visa, huc a Baillono et Muellero relata, differre videtur capsulis multo majoribus valide conico-muriculatis et habitu alieno si revera specimina ♀ *Mallotum subpeltatum* simulant. Genus a *Malloto* distinguitur filamentis ut in *Ricino* ramosissimis et quoad species typicas habitu.

151. **Cheilosa**, *Blume, Bijdr.* 613.—Flores dioici, apetali. Fl. ♂: Calycis segmenta 5, subæqualia (inæqualia, *Baill.*), crassiuscula, leviter imbricata. Disci glandulæ minutæ. Stamina 5–10, exteriora segmentis calycinis alterna, filamentis liberis; antheræ breves, loculis ovoideo-globosis parallelis connectivo disjunctis. Ovarii rudimentum obovoideum v. obtuse 2–3-fidum. Fl. ♀ (a nobis non visi): Calycis segmenta inæqualia. Discus margine denticulatus. Ovarium 3-loculare; styli basi brevissime connati, recurvi, apice 2-fidi; ovula in loculis solitaria. Capsula subglobosa, 6-sulca, in coccos dissiliens (*Baill.*). Semina albuminosa; cotyledones magnæ, latæ (*Muell. Arg.*).—Arbor procera, glabra. Folia alterna, petiolata, integerrima v. apice sinuato-dentata, penninervia. Racemi ♂ laxi, axillares v. laterales, foliis breviores. Flores parvi, breviter pedicellati, secus rhachin fasciculati, sub quaque bractea 2–4. Bracteæ minutæ.

Species 1, Javanica. *Muell. Arg. in DC. Prod.* xv. ii. 1122. *Baill. Etud. Euph.* 420.

152. **Endospermum**, *Benth. Fl. Hongk.* 304.—Flores dioici, apetali. Fl. ♂: Calyx in alabastro juniore globosus, subclausus, jam ante anthesin apertus, breviter et inæqualiter 4-dentatus, subvalvatus. Disci lobi breves. Stamina ∞ (6–10), receptaculo elevato subconico affixa, filamentis brevibus; antheræ loculis distinctis didymis subæqualiter 4-valves. Ovarii rudimentum minutum v. 0. Fl. ♀: Calyx 5-dentatus. Ovarium 2- v. rarius 3-loculare; styli in discum planum patentem brevissime 3-lobum connati; ovula in loculis solitaria. Fructus didymus, in coccos 2 indehiscentes secedens, epicarpio tenui, endocarpio indurato v. crustaceo, columella nulla relicta. Semina globosa, testa reticulato-rugosa, albuminosa; embryonem perfectum non vidimus.—Arbores habitu *Macarangæ*. Folia petiolata, rotundato-cordata v. peltata, integerrima, coriacea, subtus tenuiter tomentosa, basi 3–5-nervia, sæpeque basi 2-glandulosa et interdum glandula inter ramos venarum majorum. Racemi axillares v. laterales, utriusque sexus longiusculi simplicesque. Flores ♂ parvi, subsessiles, secus rhachin glomerati, ♀ sub quaque bractea solitarii.

Species 3, Chinæ australis et Archipelagi Malayani incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1131.

Capellenia, *Teijsm. et Binnend. Dissert. Buitenzorg*, 1866, *cum ic.*, arbor Moluccana, ex ic. et descr. videtur *Endospermi* species, *E. malaccensi*, Muell. Arg., affinis, sed folia peltata, et glandula

prope petioli insertionem ut in *E. chinense*. Flores ♂ interdum casu hermaphroditi evadunt ex auct.

153. **Cephalomappa**, *Baill. Adans.* xi. 130.—Flores monoici, apetali. Discus 0. Fl. ♂ in capitulum conferti: Calyx turbinatus, truncatus, breviter 2–5-fidus, lobis valvatis extus dense glanduloso-verrucosis. Stamina 2–4, filamentis basi breviter connatis pilosisque longe exsertis apice inflexis; antheræ dorsifixæ, loculis parallelis connectivo adnatis basi liberis longitudinaliter dehiscentibus. Ovarii rudimentum 0 (v. ex Baill. breve et tenue). Fl. ♀: Sepala 5–6, imbricata, caducissima. Ovarium 3-loculare; styli breves, crassiusculi, basi connati, superne recurvo-patentes, incisi v. 2-fidi, introrsum dense papillosi; ovula in loculis solitaria. Fructus . . .—Frutex v. arbor, indumento stellato ferrugineo. Folia alterna, petiolata, integerrima, pennivenia. Racemi ad axillas sæpe 2–3 superpositi, breves v. ad apices ramorum paniculati. Florum ♂ capitula globosa fere moriformia, terminalia v. pauca secus rhachin v. ramos paniculæ pedunculata. Flores ♀ sæpius solitarii, infra capitula mascula breviter pedunculati.

Species 1, Borneensis.

154? **Cladogynos**, *Zipp.*; *Span. in Linnæa*, xv. 349.—Flores monoici, apetali. Discus . . . Fl. ♂ capitato-congesti: Calyx coloratus, tomentosus, 2–3-partitus, subvalvatus. Stamina 4, filamentis basi in centro floris connatis; antheræ introrsum 2-rimosæ. Fl. ♀: Calyx amplus, foliaceus, 6-fidus. Ovarium 3-loculare; styli basi connati, ramosi, glanduloso-plumosi; ovula in loculis solitaria. Capsula 3-cocca.—Frutex erectus, albido-tomentosus. Folia petiolata, subpeltata, repando-dentata, sub-3-loba, subtus reticulata tomentosa. Capitula ♂ unibracteata. Flores ♀ longe pedunculati, calyce persistente. (*Char. ex Spanoghe.*)

Species 1, ins. Timor et Celebes incola, a nobis non visa.

155? **Calpigyne**, *Blume, Mus. Bot. Lugd. Bat.* ii. 193. Flores monoici, apetali. Discus . . . Fl. ♂ glomerati: Calyx rotatus, 4-fidus, laciniis subvalvatis alternis brevioribus. Stamina 4, filamentis brevibus basi in centro floris connatis; antheræ dorsifixæ, loculis introrsum dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx turbinatus, ovarium arcte cingens. Ovarium 3-loculare; styli basi brevissime connati, patentissime 2-fidi, eroso-lacerati; ovula in loculis solitaria. Fructus . . .—Frutex erectus, furcato-ramosissimus, ramulis novellis stellato-tomentosis. Folia alterna, breviter petiolata, oblonga, integerrima v. superne remote serrulata, pennivenia, inter venas transversim reticulata, coriacea, glabra v. subtus ad costam tomentella. Spicæ (utriusque sexus?) axillares et terminales, filiformes. (*Char. ex Blume.*)

Species 1, Celebes et Borneo incola, a nobis non visa.

156? **Cocconerion** (*sphalmate* Cocconerium, *supra in Conspectu*), *Baill. Adans.* xi. 87.—Flores dioici, apetali (♂ tamen ignoti). Fl. ♀: Sepala 5, valvata. Discus 0. Ovarium 2–3-loculare; styli bis terve 2-fidi, lineares; ovula in loculis solitaria. Capsula 2–3-cocca. Semina glabra, strophiolata; albumen copiosum; cotyledones planæ, latæ.—Arbores fruticesve, succo lacteo, ramis crassis nodosis. Folia verticillata (6–10-nata), subsessilia v. breviter petiolata, lanceolata, integerrima, coriacea, pennivenia. Flores ♀ in axillis solitaria, cum foliis verticillata. (*Char. ex Baill.*)

Species 2, Novo-Caledonicæ, a nobis non visæ. Genus floribus masculis ignotis dubium remanet. Folia verticillata et sepala fœminea stricte valvata cæterum in *Crotoneis* apetalis haud observantur.

157. **Chætocarpus**, *Thwaites in Hook. Kew Journ.* vi. 300, *t.* 10. (Regnaldia, *Baill. Adans.* i. 187.)—Flores dioici, apetali. Discus 4–10-lobatus v. integer. Fl. ♂: Sepala 4–5, valde imbricata. Stamina ∞ (5–20), filamentis basi in columnam connatis superne breviter liberis; antheræ oblongæ, dorsifixæ, loculis connectivo laxiusculo adnatis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum ad apicem columnæ villosulum, 3-fidum. Fl. ♀: Calyx maris. Ovarium 3-loculare; styli distincti, incurvo-erecti,

2-partiti, ramis introrsum papilloso-fimbriatis; ovula in loculis solitaria. Capsula subglobosa, echinato-setosa v. tuberculosa, in coccos 2-valves dissiliens, endocarpio duro. Semina ovoidea v. subglobosa, testa crustacea nigra nitida; albumen carnosum; cotyledones planæ, latæ.—Frutices glabri v. puberuli, habitu fere *Phyllanthi* sect. *Glochidiæ*. Folia alterna, breviter petiolata, integerrima, coriacea, pennivenia. Flores parvi, ad axillas dense glomerati.

Species 4 v. 5, quarum 2 Indiæ orientalis et Archipelagi Malayani, 2 v. 3 Americæ tropicæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1122, *et in Mart. Fl. Bras.* xi. ii. 507, *t.* 100. *Bedd. Fl. Sylv. t.* 284.

Calyx in speciebus Asiaticis 4-merus, in Americanis (sect. *Amanoella*, Baill. Adans. xi. 94) 5-merus, sed characteres cæteri et habitus omnino conveniunt. Fructum ad species Asiaticas descripsimus, sed idem dicitur in Americanis; inter has includenda sunt specimina Guianensia *Rob. Schomburgk, coll.* 1, *n.* 928, *et coll.* 2, *n.* 776 (*Rich. Schomburgk, n.* 1519).

158. **Mettenia,** *Griseb. Fl. Brit. W. Ind.* 43.—Flores dioici, apetali. Fl. ♂ (nec ab auctoribus recentioribus nec a nobis visi): Calyx tubulatus, minutus, irregulariter 3-fidus, pubescens, laciniis ovatis obtusis. Filamenta 7, in columnam calyce longiorem inferne villosam connata, apice libera, 3 media longiora, antheræ didymæ (*Swartz*). Fl. ♀: Sepala 5, lata, pubescentia, valde imbricata (0 ex Swartz). Discus hypogynus margine laciniatus. Ovarium 3-loculare; styli distincti, crassiusculi, 2-partiti; ovula in loculis solitaria. Capsula globosa, dense tuberculoso-echinata, in coccos 2-valves v. potius in valvas 2-partitas dissiliens. Semina ovoideo-globosa, strophiolata, in columella 3-alata diu persistentia, testa crustacea nitida; embryo . . . —Frutices v. arbores præter inflorescentiam glabri. Folia alterna, breviter petiolata, ovata, integerrima, coriacea. Flores ♀ pubescentes, ad axillas foliorum superiorum fere ad bracteas reductorum fasciculati, racemum terminalem basi foliatum formantes.

Species ut videtur 2, altera Swartziana fruticosa Cubensis, nobis e solo specimine fructifero Wright n. 1973 nota, altera Jamaicensis, arborea, e speciminibus ♀ florentibus fructiferisque descripta, *Muell. Arg. in DC. Prod.* xv. ii. 1255. Genus evidenter *Chætocarpo* valde affine cui forte melius notum jungendum.

159. **Gelonium,** *Roxb. in Willd. Spec. Pl.* iv. 831. (Suregada, *Roxb., nomen tantum*; *Willd. in Ges. Nat. Fr. Berl. Neue Schrift.* iv. 206. Erythrocarpus, *Blume, Bijdr.* 604. Ceratophorus, *Sond. in Linnæa,* xxiii. 120.)—Flores dioici v. rarius monoici, apetali. Fl. ♂: Sepala 5, lata, valde imbricata. Discus obsoletus. Stamina ∞ (10–60), in receptaculo convexo dense conferta, filamentis filiformibus liberis; antheræ oblongæ, juxta basin dorsifixæ, loculis parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Sepala 5, quam in mare angustiora, imbricata. Discus margine membranaceus, interdum staminodiorum rudimenta brevia gerens. Ovarium 2–3-loculare; styli breves, patentes, brevissime 2-fidi v. laceri; ovula in loculis solitaria. Fructus globosus, sub-3-queter, endocarpio duro 3-loculari, indehiscente v. tardius loculicide fisso v. in coccos demum secedente. Seminum testa crustacea, extus in vivo pulposo-carnosa; albumen carnosum; cotyledones planæ, latæ.—Arbores parvæ v. frutices glabri. Folia alterna, breviter petiolata, subcoriacea, integerrima v. rarius paucidentata. Stipulæ connatæ, caducissimæ, annulum prominulum ad nodum relinquentes. Flores parvi, glomerato-cymulosi, glomerulis oppositifoliis sessilibus v. brevissime pedunculatis.

Species 13, Asiæ calidioris et Africæ tropicæ et australis incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1127. *A. Juss. Euph. Tent. t.* 10. *Wight, Ic. t.* 1867. *Bot. Mag. t.* 3231. Nomen *Suregada*, Roxb., a Baillono Adans. xi. 92, *Gelonio* præpositum, ab auctore speciminibus in variis herbariis adscriptum, ab ipso tamen nec in Horto Benghalensi nec in aliis suis operibus receptum a Willdenowio mox rejectum fuit et a Jussieuo Muellero aliisque rite neglectum.

160. **Baliospermum,** *Blume, Bijdr.* 603.—Flores monoici, apetali. Fl. ♂: Sepala 4–5, membranacea, lata, imbricata. Discus membranaceus, integer v. in glandulas divisus. Stamina ∞ (10–30), receptaculo convexiusculo affixa, filamentis tenuibus

liberis; antheræ terminales, loculis adnatis nunc connectivo angusto contiguis distinctis, nunc connectivum latius marginantibus apice confluentibus. Ovarii rudimentum minutum v. 0. Fl. ♀: Sepala 5–6, interdum dentata. Discus integer. Ovarium 3–4-loculare; styli breves, crassiusculi, recurvi, breviter 2-fidi; ovula in loculis solitaria. Capsula sæpius tridyma, in coccos 2-valves dissiliens, endocarpio duriusculo haud crasso. Semina ovoidea, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Frutices v. caules e basi lignescente herbacei erecti. Folia alterna, breviter v. longius petiolata, membranacea v. subcoriacea, irregulariter sinuato-dentata v. sublobata, pennivenia et basi interdum 3–5-nervia. Racemi axillares, nunc breves densi, florum fasciculis confertis, nunc elongati laxique v. subpaniculati. Flores ♂ parvi, cymulis v. fasciculis secus rhachin plus minus dissitis, ♀ singuli ad basin racemi sub bracteis solitarii v. varie in fasciculis ♂ mixti, quam ♂ longius pedicellati.

Species bene notæ 4, Indiæ orientalis incolæ. *Muell. Arg. in. DC. Prod.* xv. ii. 1125. *Kurz, For. Fl. Brit. Burm.* ii. 410. *Wight, Ic. t.* 1885. *Dcne. in Jacquem. Voy. Bot. t.* 155.

161? **Phyllobotryum,** *Muell. Arg. in Flora,* 1864, 534, *et in DC. Prod.* xv. ii. 1231.—Flores dioici? apetali, ♀ ignoti. Fl. ♂: Perianthium calycinum, 5–6-partitum, segmentis valde imbricatis, bracteis 3 segmentis similibus stipatum (involucratum, *Muell. Arg.*). Discus 0. Stamina ∞ (20–30 v. ex Muell. usque ad 50), receptaculo convexo affixa, filamentis liberis apice in connectivum dilatatis; antherarum loculi ad apicem connectivi divaricati, supra longitudinaliter dehiscentes, post dehiscentiam aperti quasi transversim 2-valvati. Ovarii rudimentum 0. Fructus . . .—Arbuscula glabra, ramulis crassiusculis. Folia alterna, breviter petiolata, ampla, longe oblonga, acuminata, integerrima v. vix dentata, pennivenia, stipulis rigidulis angustis persistentibus. Racemi ♂ breves, folii costæ in pagina superiore adnati, floribus secus rhachin dissitis paucis sessilibus.

Species 1, Africæ tropicæ occidentalis incola. Genus floribus fœmineis ignotis valde dubium est. Baillon in ovario quodam parum evoluto placentas 3 parietales vidit, et plantam ad *Bixaceas* refert, quod tamen examine ulteriore confirmandum. Habitu species nonnullas *Agrostistachyos* refert (inflorescentia adnata excepta) nec nostro sensu ullo modo *Phyllonomo* comparandum.

162. **Erismanthus,** *Wall. Cat. Herb. Ind. n.* 8011.—Flores monoici, apetali. Discus 0. Fl. ♂ (in alabastro juniore): Calycis parvi segmenta 5, valde imbricata. Stamina ∞ (ad 12), filamentis liberis; antheræ erectæ, loculis parallelis adnatis longitudinaliter rimosis. Ovarii rudimentum 0. Fl. ♀: Sepala 5, magna, foliacea, valde inæqualia, imbricata. Ovarium 3-loculare; styli basi in columnam tenuem villosam connati, superne patentes 2-fidi; ovula in loculis solitaria. Capsula junior 3-cocca videtur, matura ignota.—Frutex v. arbor glaber v. partibus novellis patentim pilosis. Folia opposita, subsessilia, basi oblique cordata fere dimidiata, ampla, dentata, rigidule membranacea, pennivenia; stipulæ angustæ, rigidæ. Spicæ ♂ juniores amentiformes, oblongæ, densæ, ad axillas subsessiles reflexæque, bracteis angustis imbricatis alabastra obtegentibus. Fl. ♀ solitarii, longe pedunculati.

Species 1, ins. Penang incola. *Muell. Arg. in DC. Prod.* xv. ii. 1138. Genus quoad flores ♂ et fructus adhuc imperfecte notum, sed nulli proxime affine videtur.

163. **Epiprinus,** *Griff. Notul.* iv. 487.—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx in alabastro globosus, membranaceus, clausus, per anthesin in lobos 2–4 valvatos irregulariter fissus. Stamina ∞ (8–15), filamentis liberis longiusculis basi incrassatis supra medium abrupte inflexis apice tenuibus; antheræ magnæ, oblongæ, dorsifixæ, jam in alabastro erectæ, loculis parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum crassum, sub-3-lobum. Fl. ♀: Calycis segmenta 6, sub anthesi lanceolata, reduplicato-valvata, basi brevissime connata, post anthesin aucta; squamæ totidem exteriores, bracteiformes v. glanduliformes, segmentis alternæ et pluries breviores, caducæ. Ovarium breve, 3-loculare; styli in columnam longam crassam connati, apice breviter liberi, patentes, breviter 2-fidi et laceri; ovula in loculis solitaria. Capsula magna, subglobosa, obscure tridyma, in coccos 2-valves dissiliens, endocarpio crasso duro sublignoso.

Semina subglobosa, testa tenuiter crustacea; albumen et embryo in speciminibus visis imperfecta.—Frutex v. arbuscula glabra. Folia alterna, ad apices ramorum subconferta, exteriora longe petiolata, ampla, integerrima, coriacea, penninevenia; floralia minora, subsessilia, conferta. Spicæ v. racemi ad apices ramorum v. in summis axillis plures, indivisi. Flores ♂ in parte superiore numerosi, conferti, subsessiles; ♀ in parte inferiore plures, dissiti, breviter pedicellati. Racemi fructiferi (parte ♂ delapsa?) laxi, pedicellis magis evolutis. Capsulæ calycis segmentis valde auctis foliaceis quasi involucratæ.

Species 1, Malaccensis. *Muell. Arg. in DC. Prod.* xv. ii. 1024.

164. **Pycnocoma,** *Benth. in Hook. Nig. Fl.* 508.—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx in alabastro ovoideus, clausus, per anthesin valvatim 3–5-partitus, segmentis reflexis. Stamina ∞ (sæpe ultra 50), receptaculo crasso elevato undique inter stamina glanduloso-lobato imposita, filamentis elongatis liberis in alabastro sæpius flexuosis; antheræ parvæ, terminales, loculis apici leviter incrassato filamenti adnatis subparallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Sepala 5, imbricata. Ovarium breve, 3-loculare; styli basi in columnam carnosam connata, superne liberi, erecto-patentes, indivisi, subteretes, apice stigmatoso leviter dilatato, rarius inferius stigmatosi; ovula in loculis solitaria. Capsula junior 3-dyma v. horizontaliter 3-cornuta, matura ignota.—Frutices v. arbusculæ. Folia ampla, subsessilia, ad apices ramulorum conferta (v. in specie inedita secus ramos sparsa), basi longe angustata, integerrima, penninevenia. Racemi in axillis superioribus folio multo breviores, indivisi. Flores sub bracteis ovatis solitarii, ♀ sæpius terminalis, inferiores ♂ v. bracteæ inferiores vacuæ.

Species notæ 8, quarum 4 ex Africa tropica characterem supra datum præbentes, 4 Mascarenses a nobis non visæ. *Muell. Arg. in DC. Prod.* xv. ii. 951.

165. **Ramelia,** *Baill. Adans.* xi. 132.—Flores monoici, apetali. Fl. ♂: Calyx minimus, valvatim 2–3-partitus. Stamina 2–3, centralia, sepalis alterna, filamentis liberis incurvis; antheræ introrsum 2-rimosæ. Fl. ♀: Sepala 4–6, inæqualia, crassiuscula, imbricata. Ovarium calyce longius, 3- rarius 4-loculare; styli in columnam basi integram obconicam superne infundibuliformem 3- rarius 4-lobam connati, lobis subpetaloideis intus et margine stigmatosis: ovula in loculis solitaria. Capsula 3- rarius 4-cocca. Semina parce strophiolata; embryo albumine brevior et angustior.—Frutex. Folia alterna, spurie verticillata, simplicia, penninevenia. Spicæ unisexuales, laterales et terminales, ♂ filiformes remote glomeruligeræ. Flores ♀ secus rhachin in axillis bractearum sepalis similium et basi in glandulas 2 minutas incrassatarum solitarii, bracteolis 2 stipati. (*Char. ex Baill.*)

Species 1, Novo-Caledonica, a nobis non visa.

166. **Astrococcus,** *Benth. in Hook. Kew Journ.* vi. 327.—Flores monoici, apetali. Fl. ♂: Sepala 4, valvata. Discus 0 v. e lobis 4 crasso-carnosis. Stamina 4, sepalis alterna (rarius 6–∞?) circa receptaculum crassiusculum affixa, filamentis liberis erectis; antheræ ovatæ, basifixæ, loculis parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Sepala sæpius 5, angusta, imbricata. Discus 0. Ovarii carpella 3, vix basi brevissime connata, stellato-radiantia; styli in columnam crassam oblongam apice cavam integerrimam v. 6-dentatam coaliti; ovula in carpellis solitaria, horizontalia. Capsulæ cocci stellato-patentes, obovoidei v. oblongi, varie muricati v. 2-cornuti, demum a columna centrali dissilientes, 2-valves. Semina subglobosa, testa crustacea; albumen crassum, carnosum; cotyledones latæ, planæ.—Arbusculæ v. frutices graciles, pube tenui in foliis perparca. Folia alterna v. ad apices ramulorum conferta, brevissime petiolata, leviter dentata, membranacea v. coriacea. Racemi graciles, axillares v. laterales. Flores parvuli, breviter pedicellati, ♂ sub bracteis 1–3-ni, ♀ sub bracteis solitarii in parte inferiore racemi, cum uno sæpissime ad apicem racemi subterminali.

Species 2, Brasiliæ borealis incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 766, *et in Mart. Fl. Bras.* xi. ii. 329, *t.* 49. *Baill. Etud. Euph. t.* 21, *et Adans.* v. 307. Disci fl. ♂ lobi in *A. cornuta*, Benth., sub

filamentis crassissimi, valde prominentes, in *A. coriacea*, Benth., desunt nisi cum basi crassiuscula filamentorum confusi.

167. **Angostylis**, *Benth. in Hook. Kew Journ.* vi. 328.— Flores monoici (v. dioici ?), apetali. Discus 0. Fl. ♂: Sepala 4, rarius 3, valvata, herbacea, crassinscula, intus papillosa. Stamina ∞ (15–25), receptaculo conico fere columnari affixa, filamentis brevibus; antheræ erectæ, basifixæ, loculis distinctis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Sepala 5, angusta, imbricata. Ovarium 3-loculare; styli in columnam cavam seu urceolum angustum apice breviter 6-lobum coalita; ovula in loculis solitaria. Capsula tridyma, urceolo stylari coronata, in coccos subglobosos 2-valves dissiliens, exocarpio molliter muricato, endocarpio crustaceo. Semina subglobosa, ecarunculata; albumen carnosum; cotyledones planæ, latæ.—Arbor gracilis v. frutex elatior multicaulis, pube tenui in foliis evanida. Folia alterna, in ramulis conferta, subsessilia, ampla, denticulata, pennivenia. Flores quam in affinibus majores, ♂ ad nodos ramorum annotinorum v. vetustiorum 2–3-ni, pedicellati, ♀ in axillis foliorum solitarii, pedicello longiore rigidiore.

Species 1, Brasiliæ borealis incola. *Muell. Arg. in DC. Prod.* xv. ii. 767, *et in Mart. Fl. Bras.* xi. ii. 332, *t.* 50. *Baill. Etud. Euph. t.* 9.

168. **Sphærostylis**, *Baill. Etud. Euph.* 466, *t.* 21.—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx valvatim 3-partitus. Stamina 3, sepalis alterna, filamentis brevibus in centro floris in columnam connatis; antheræ in summa columna erectæ, demum subreflexæ, loculis introrsum contiguis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Sepala 5–6, valvata v. leviter imbricata. Ovarium 3-loculare; styli in massam globosam 3-sulcam ovario multo majorem connati, summo apice brevissime liberi 2-partitique; ovula in loculis solitaria. Capsula 3-cocca. Semina globosa, lævia.—Frutex scandens. Folia alterna, petiolata, ovata, 3-nervia. Racemi spiciformes, axillares terminalesque. Flores sub quaque bractea solitarii, plerique ♂, inferiores pauci ♀. (*Char. ex Baill.*)

Species 1, Madagascariensis, a nobis non visa. *Muell. Arg. in DC. Prod.* xv. ii. 768. Genus ex charactere dato *Plukenetiæ* valde affine, sepalis ♂ staminibusque 3 filamentis connatis parum distinctum.

169. **Plukenetia**, *Linn. Gen. n.* 1080.—Flores monoici, apetali. Discus 0. Fl. ♂: Calycis segmenta 4–5, valvata. Stamina ∞ (8–30), receptaculo carnoso convexo conico elongato v. subgloboso affixa, filamentis brevibus liberis; antheræ breves, erectæ, loculis sejunctis subglobosis v. interdum didymis parallelis v. divergentibus longitudinaliter dehiscentibus. Ovarii rudimentum 0, v. rarius (in *P. tamnoide*) in centro floris filiforme apice capitellatum. Fl. ♀: Sepala imbricata. Ovarium 3- v. sæpius 4-loculare; styli in columnam carnosam cylindraceam v. globosam cavam apice dentatam v. breviter lobatam connati; ovula in loculis solitaria. Capsula carnosula v. sicca, subglobosa v. depresso-3–4-loba, in coccos 2-valves dissiliens. Semina globosa, interdum uno latere 3-costata, testa crustacea; albumen carnosum; cotyledones latæ, planæ.—Frutices suffruticesve scandentes, plus minus volubiles (excepta *P. conophora*, Muell. Arg.). Folia alterna, petiolata, sæpe cordata, 3–5-nervia et pennivenia, integerrima v. dentata. Racemi axillares supra-axillares v. laterales, interdum fere oppositifolii altius tamen quam folia affixi. Flores pedicellati, ♂ sæpius minuti subfasciculati rarius majores, ♀ in parte inferiore racemi pauci v. ad basin solitarii et rigidius pedicellati.

Species ad 12, regionum calidiorum utriusque orbis incolæ, in Australia tamen desunt. *Muell. Arg. in DC. Prod.* xv. ii. 769, *et in Fl. Bras.* xi. ii. 333. Facile in sectiones sequentes distribuendæ:—

1. In *Plukenetia* typica Dominicana, stylorum columna longissima, tenuis, apice radiatim 4-loba, capsula depressa 4-loba, lobis carinatis fere appendiculatis. *Plum. Ic. t.* 226, *icon in Lam. Illustr. t.* 788 *repetita.* Hæc sola species sectionem *Euplukenetiam* formare debet.

2. PTEROCOCCUS, *Hassk. in Flora*, 1842; *Beibl.* ii. 41. CERATOCOCCUS, *Meisn. Gen. Pl. Comm.* 369

(Sajorium, *Endl. Gen. Suppl.* iii. 98. Hedraiostylus, *Hassk. Cat. Hort. Bog.* 234), species plures continet tam Americanas quam Africanas et Asiaticas stylorum columna crassissima obovoidea v. globosa, capsula ut in *Euplukenetia* depresso-4-loba rarius 3-loba, lobis obtusis v. dorso herbaceo-appendiculatis. Huc pertinent, præter speciem Asiaticam et duas Africanas, *P. penninervia*, Muell. Arg., et *P. verrucosa*, Sm., a Muell. Arg. in *Euplukenetia* inclusæ.

3. *Angostylidium*, Muell. Arg., est species Africana, fruticosa, elata et gracilis, sed non scandens. Stamina numerosa. Ovarium minimum, 4–5-merum, ad basin columnæ stylaris ovario ipso triplo saltem longioris cylindraceæ apice in lobos 4–5 latos breves divisæ.

4. *Cylindrophora*, Muell. Arg., est species Peruviana a nobis non visa, ex char. dato *Angostylidio* affinis.

5. Fragariopsis, *St. Hil. Morphol.* 426 (*Fl.* ♂); *Baill. Etud. Euph.* 497, *t.* 12, 13; *Muell. Arg. in DC. Prod.* xv. ii. 773, *et in Mart. Fl. Bras.* xi. ii. 336, *t.* 52 (Accia, *St. Hil. l. c.* 499, *fl.* ♀. Botryanthe, *Klotzsch in Wiegm. Archiv.* vii. 190, *t.* 9. Vigia, *Vell. Fl. Flum. Ic.* ix. *t.* 128, *ex ic. rudi*), est species Brasiliensis, quoad ovarium interdum nec semper 3-merum, stylorum columna elongata cylindracea crassiuscula, capsula ante maturitatem subglobosa carnosa fere *Anabenæ*, sed in fl. ♂ receptaculum crassius globosum, filamentis brevissimis fere immersis, ovarii rudimento 0. Capsula immatura adhuc carnosior, matura nobis ignota. Antheræ omnino generis. Racemi fere omnes oppositifolii nisi paullo altius affixi, quod casu tantum observatur in cæteris speciebus.

6. Anabæna, *A. Juss. Euph. Tent.* 46, *t.* 15; *Muell. Arg. in Mart. Fl. Bras. t.* 51 (*Plukenetiæ sect.*), est species Brasiliensis distincta imprimis ovarii rudimento filiformi apice capitellato in fl. ♂ sæpissime evoluto, ovario in fl. ♀ 3-mero, capsula ante maturitatem carnosula fere globosa v. obscure didyma, matura tamen in coccos 2-valves solvitur.

In specie adhuc inedita e Monterico Americæ meridionalis (extratropicæ?) *Pearce*, caules decumbentes videntur, folia obovata pennivenia breviter petiolata, flores monoici racemulis lateralibus oppositifoliis v. fere axillaribus, stamina numerosa dense capitata. Ovarium ad normam generis 4-loculare, stylo carnoso ovoideo-globoso.

Specimen e colonia Tovar Venezuelæ, *Moritzi, n.* 1661, plantam exhibet glaberrimam *Plukenetiæ* valde affinem, nisi revera congenerem. Folia ampla, obovali-oblonga, membranacea, pennivenia, petiolo apice prominule 2-glanduloso. Flores dioici, axillares, ♂ omnino *P. obovatæ*, in racemum petiolo multo breviorem dispositi, ♀ in pedunculo solitarii. Ovarium 2-loculare, stylo depresso pulvinato quam ovarium ipsum minore.

170. **Acidoton**, *Swartz, Prod.* 83; *Fl. Ind. Occid.* 952, *t.* 18.—Flores monoici, apetali. Discus 0. Fl. ♂: Sepala 3–5 (sæpius 4), valvata. Stamina ∞ (ultra 30), receptaculo crasso carnoso elevato imposita, filamentis brevibus liberis; antheræ ovatæ, loculis parallelis distinctis extrorsum v. sublateraliter dehiscentibus. Ovarii rudimentum 0, receptaculo in centro cavo. Fl. ♀: Sepala 5–6, angusta, imbricata. Ovarium breve, 3-loculare; styli basi in columnam crassam connati, superne breviter patentes, integri v. vix 2-fidi; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves dissiliens, endocarpio duro. Semina subglobosa, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Arbuscula laxe ramosa, inflorescentia capsulisque pilis brevibus urentibus indutis, cæterum glabriuscula. Folia alterna, breviter petiolata, integerrima, coriacea, pennivenia. Rami sæpius unisexuales, inflorescentia axillari. Spicæ v. fasciculi ♂ breves, sessiles, floribus longiuscule pedicellatis. Spicæ ♀ longiores, floribus secus rhachin distantibus sub quaque bractea solitariis fere sessilibus.

Species 1, Jamaicensis. *Muell. Arg. in DC. Prod.* xv. ii. 914. *Baill. Etud. Euph. t.* 18.

171. **Platygyne**, *Mercier in Ser. Bull. Bot.* 168. (Acanthocaulon, *Klotzsch in Endl. Gen. Suppl.* iv. iii. 88.)—Flores monoici, apetali. Discus 0. Fl. ♂: Sepala 5, rarius 4, valvata, per anthesin reflexa. Stamina 5, rarius 4 v. 6–8, receptaculo elevato crasso dense villoso imposita, exteriora sepalis alterna, filamentis brevibus summo apice subrecurvis; antheræ ovatæ, loculis distinctis parallelis contiguis extrorsum v. sublateraliter dehiscentibus. Ovarii rudimentum 0, receptaculo intra stamina glabrato. Fl. ♀: Sepala 6, rarius 5 v. 7, angusta, imbricata. Ovarium breve, villosum, 3-loculare; styli multo majores, in columnam crassam concavam connati, superne breviter patentes, crassi, papilloso-villosi, retusi; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves

dissiliens, endocarpio duriusculo. Semina globosa, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Frutex volubilis, pilis urentibus conspersus v. hispidus. Folia alterna, brevissime petiolata, sæpius angusta, dentata, pennivenia. Inflorescentiæ ad apices ramorum sessiles, mox oppositifoliæ v. laterales (interdum axillares ?). Flores ♂ pedicellati, fasciculati, subcymosi; ♀ sessiles, solitarii v. gemini.

Species 1, Cubensis, *Muell. Arg. in DC. Prod.* xv. ii. 913. *Baill. Etud. Euph. t.* 4.

172. **Tragia**, *Linn. Gen. n.* 1048.—Flores monoici, apetali. Fl. ♂: Calyx in alabastro globosus v. rarius obovoideus, per anthesin valvatim 3–5-partitus. Discus 0 v. obscurus. Stamina sæpius 3, interdum 2 v. 1, in paucis speciebus ∞ (usque ad 60), filamentis liberis v. plus minus connatis; antheræ ovatæ v. oblongæ, dorso v. fere ad basin affixæ, loculis parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum 0 v. minutum. Fl. ♀: Sepala 6 v. rarius pauciora v. 7–8, imbricata, integra v. pinnatifida. Ovarium 3-loculare; styli basi v. sæpe ultra medium in columnam coaliti, apice liberi patentes indivisi; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves dissiliens, endocarpio crustaceo. Semina globosa, estrophiolata, testa crustacea; albumen carnosum; cotyledones latæ, planæ.—Herbæ perennes v. suffrutices scandentes v. volubiles, rarius caulibus brevioribus ascendentibus, pilis sæpe urentibus præsertim in fructibus hispidæ v. echinatæ, rarius undique glabratæ. Folia alterna, petiolata, dentata, rarius 2–3-loba, basi sæpe cordata et 3–5-nervia. Racemi terminales oppositifolii v. axillares, sæpissime androgyni, floribus ♂ in parte superiore ♀ in inferiore, v. rarius 2-fidi, ramo longiore ♂ breviore ♀. Flores sæpius sub quaque bractea solitarii, in paucis speciebus ♂ glomerati.

Species ad 50, per regiones calidiores utriusque orbis late dispersæ, extra tropicos usque ad Africam australem et Americæ borealis civitates australiores extensæ. *Muell. Arg. in DC. Prod.* xv. ii. 927, *et in Mart. Fl. Bras.* xi. ii. 403, *t.* 58. *Kurz, For. Fl. Brit. Burm.* ii. 398. *A. Juss. Euph. Tent. t.* 15. *Jacq. Ic. Rar. t.* 190. *Schweinf. Rel. Kotsch. t.* 34. *Beauv. Fl. Ow. et Ben. t.* 54. *Cav. Ic. t.* 557. *Pœpp. et Endl. Nov. Gen. et Sp. t.* 223. *Vell. Fl. Flum. Ic.* x. *t.* 6, 8, 10.

Genus naturale, stylo columnari *Plukenetiæ* affine, facile distinguitur antheris, styli columna minus carnosa et pilis sæpe urentibus capsulam sæpius obtegentibus, multum variat staminum numero et filamentorum indole, et a Muellero in sectiones 13 dividitur. Ex his *Eutragia* et *Ratiga* ex America perianthii segmentis integris, et *Pagira* ex orbe vetere segmentis sæpe pinnatifidis, specierum maximam partem includunt et characteribus levioris momenti nec habitu separantur. Stamina 3 v. interdum 2 v. 1, filamentis liberis v. basi connatis. Flores etiam ♂ sub quaque bractea sæpissime solitarii. Huc pertinent icones omnes supra citatæ. Genera tamen sequentia a variis auctoribus proposita, et in Prodromo ad sectiones reducta, pleraque monotypica a typo generico plus minus decedunt.

Leptobotrys, *Baill. Etud. Euph.* 478, *t.* 2, est *T. urens*, Linn., species boreali-Americana sæpe nec semper 2-andra, filamentis basi breviter connatis. Variat spicis brevibus v. ut in icone citata longis gracillimisque.

Agirta, *Baill. Etud. Euph.* 463, est species Madagascariensis a nobis non visa, floribus sub quaque bractea glomerulatis, antherarum connectivo ultra loculos producto, sepalis floris ♀ valvatis.

Lassia, *Baill. Etud. Euph.* 464, *t.* 4, est species Madagascariensis a nobis non visa, staminibus 3, filamentis in columnam connatis antherarum loculis divaricatis ex icone fere horizontalibus ad apicem columnæ extrorsum sessilibus.

Leucandra, *Klotzsch in Wiegm. Archiv.* vii. 188, stabilita fuit ad speciem Brasiliensem herbaceam v. suffruticosam 4-andram. Huic addit Muell. Arg. species nonnullas habitu normali generis, staminibus 4–8.

Bia, *Klotzsch in Wiegm. Archiv.* vii. 189, species continet 4, Americæ australis, habitu normali, staminibus 10–20, et includit etiam Leptorhachis, *Klotzsch, l. c.*

Zuckertia, *Baill. Etud. Euph.* 495, *t.* 4, est species Mexicana a nobis non visa, alabastris ♂ clavatis, staminibus ad 40, antheris majusculis dorsifixis minute apiculatis.

Ctenomeria, *Harv. in Hook. Lond. Journ.* i. 29, est species Austro-Africana, floribus ♂ in genere majusculis, staminibus 40–60, filamentis tenuissime capillaribus, antheris in genere longis. Sepala floris ♀ ut in pluribus aliis pinnatifida. In Prodromo xv. ii. 925, pro genere proprio cum specie valde dissimili (*Leptorhachi*, Kl.), associatur, in flore Brasiliensi iterum ad *Tragiam* reducitur.

173. **Cnesmone,** *Blume, Bijdr.* 630 (err. typ. Cnesmosa), *et in Fl. Jav. Præf.* 6.—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx in alabastro globosus, clausus, per anthesin valvatim 3-fidus, tubo depresso ore subcontracto, lobis latis. Stamina in fundo calycis 3, lobis alterna, vix e tubo exserta, filamentis liberis crassis; antheræ prope basin dorsifixæ, connectivo crasso ultra loculos in appendicem linearem supra antheram reflexam producto, loculis discretis subparallelis subextrorsum longitudinaliter dehiscentibus. Ovarii rudimentum 0 v. obscurum. Fl. ♀: Sepala 3, demum aucta, integerrima. Ovarium breve, 3-loculare; styli carnosi, basi in massam brevem latam connati, pro maxima parte liberi, incurvo-erecti, crassi, margine introrsum processibus seu papillis crassis fimbriati fere pinnatifidi; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves dissiliens. Semina globosa; testa crustacea (extus in vivo pulposa quasi arillata?); albumen carnosum; cotyledones latæ, planæ.—Frutex alte scandens, undique plus minus fulvo-villosus, habitu *Tragiæ* at rudis. Folia alterna, petiolata, denticulata, penninervia, basi sæpe cordata. Stipulæ latæ, persistentes. Racemi terminales v. oppositifolii, floribus sub quaque bractea solitariis brevissime pedicellatis, superiores ♂ ebracteolati, inferiores 1–∞ ♀, bracteolis 2 stipati.

Species 1, Indiæ orientalis et Archipelagi Malayani incola. *Muell. Arg. in DC. Prod.* xv. ii. 926. *Baill. Etud. Euph. t.* 4.

174. **Dalechampia,** *Linn. Gen. n.* 1081.—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx membranaceus, in alabastro globosus, per anthesin valvatim 4–6-partitus. Stamina ∞ (sæpius 20–30, rarius plura v. pauciora), filamentis in receptaculo convexo v. plus minus in columnam crassam elevato breviter liberis v. alte in columnam tenuiorem coalitis; antheræ erectæ, loculis contiguis parallelis sæpe didymis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx 5–12-partitus, segmentis imbricatis sæpe linearibus pinnatifidis fimbriatisve, rarius lanceolatis integerrimis. Ovarium 3–4-loculare; styli in columnam longam sæpe carnosam apice obtusam v. dilatatam oblique v. æqualiter excavatam integram v. breviter radiato-lobatam connati; ovula in loculis solitaria. Capsula 3–4-dyma v. angulata, in coccos 2-valves dissiliens, endocarpio crustaceo v. indurato. Semina globosa v. ellipsoidea, estrophiolata; albumen carnosum; cotyledones planæ, latæ.—Frutices suffruticesve, sæpius volubiles et interdum alte scandentes, glabri v. pilis simplicibus hirsuti v. tomentosi. Folia alterna, petiolata, integra 3–5-loba v. digitatim 3–5-foliolata, penninervia basique sæpius 3–7-nervia. Racemi sæpius in capitula contracti, ad axillas sessiles v. pedunculati, bracteis 2 maximis sæpe coloratis venosisque integris v. 3-lobis involucrati, rarius laxiores bracteis haud v. vix auctis. Flores in capitulo sessiles v. breviter pedicellati, exteriores v. inferiores ♀, sub quaque bractea sæpe 3-ni, interiores v. superiores ♂ sub quaque bractea 3–∞. Adsunt etiam interdum in capitulo massæ 2-3 carnoso-ceraceæ multicristatæ, quæ flores steriles nuncupantur. Capsulæ variant parvæ globoso-3-dymæ, v. magnæ duræ angulatæ, calyce aucto sæpe stipatæ.

Species ad 60, per regiones calidiores utriusque orbis late dispersæ, pleræque tamen Americanæ. *Muell. Arg. in DC. Prod.* xv. ii. 1233, *et in Mart. Fl. Bras.* xi. ii. 635, *t.* 88 *ad* 91. *Baill. Etud. Euph. t.* 3, 4. *Endl. Atakta, t.* 20. 21. *Wight, Ic. t.* 1881, 1882. *Wawra in Pr. Maxim. Reise, Bot. t.* 6.

Cremophyllum, *Scheidw. in Bull. Acad. Sc. Brux.* ix. i. 23, est planta humilis in horto Bruxellensi e seminibus Mexicanis enata (nec Brasiliana ut perperam a Muell. Arg. citatur), evidenter *D. Roezleana*, Muell. Arg. (Bot. Mag. t. 5640, Regel Gartenfl. t. 532) valde affinis et forte forma depauperata, caule erecto, foliis longis fere sessilibus penniveniis. His evidenter affinis est *D. magnoliæfolia*, Mart., e Brasilia. Præter habitum characteribus nullis definitis a cæteris separandæ videntur, etsi plantæ Mexicanæ insignes sunt massis cristatis in capitulo valde evolutis. Illis pertinere videtur specimen Mexicanum e Teapa, *Linden, n.* 1614.

Rhopalostylis, *Klotzsch in herb. plur.* est *D. micrantha*, Pœpp. et Endl. Nov. Gen. et Sp. iii. 19, *t.* 222, species inflorescentia laxa insignis, bracteis vacuis non auctis nec flores involucrantibus.

D. Houllettiana, Baill. Etud. Euph. 486. t. 3, f. 31, 32, species Brasiliana nobis ignota, ex icone a

genere longe differt disco hypogyno evoluto ovario 4-loculari et stylo filiformi apice integerrimo subulato.

175. **Mabea,** *Aubl. Pl. Gui.* 867, *t.* 334.—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx parvus, membranaceus, prima juventute globosus subclausus, longe ante anthesin apertus, 3–5-lobus. Stamina ∞ (12–50), receptaculo convexo v. conico affixa, filamentis brevissimis; antherarum loculi subintrorsum adnati, paralleli v. divergentes, longitudinaliter dehiscentes. Ovarii rudimentum 0. Fl. ♀: Calyx 5–6-partitus, segmentis imbricatis sæpe valde inæqualibus. Ovarium 3-loculare; styli in columnam longam coaliti, superne liberi tenues indivisi; ovula in loculis solitaria. Capsula globosa v. tridyma, in coccos 2-valves dissiliens, endocarpio duro. Semina ovoidea, strophiolata, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Arbores coma diffusa v. sæpius frutices sarmentosi v. alte scandentes. Folia alterna, oblonga v. angusta, integerrima v. denticulata, pennivenia. Racemi terminales, floribundi, sæpe compositi, singuli v. plures in paniculam dispositi. Bracteæ sæpius glandulis 2 magnis stipatæ. Flores ♂ numerosi, antheris supra calycem dense confertis globulosi, sub quaque bractea sæpius plures fasciculati, v. in racemulum secundarium ebracteatum dispositi; ♀ ad basin racemi pauci, sub quaque bractea solitarii, pedicellati.

Species enumeratæ 16, plures inter se simillimæ, Americæ tropicæ imprimis Brasiliæ et Guianæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1148, *et in Mart. Fl. Bras.* xi. ii. 517, *t.* 73, 74. *Baill. Etud. Euph. t.* 13.

176. **Homalanthus,** *A. Juss. Euph. Tent.* 50, *t.* 16 (Omalanthus). (Duania, *Noronh. ex Hassk. Hort. Bogor.* 233, *nomen tantum.* Carumbium, *Reinw. in Syll. Pl. Soc. Ratisb.* ii. 6, *prius in Blume, Cat. Hort. Buitenz.* 105, *nomen tantum.*)—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx compressus, brevis, latus, 2-partitus, segmentis planis sibimet appressis margine leviter imbricatis. Stamina ∞ (6–50), filamentis brevissimis; antheræ calycem superantes, loculis brevibus v. subglobosis, dorso contiguis divaricatis vertice 2-valvatim dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx 2–3-fidus, haud compressus. Ovarium 2- v. rarius 3-loculare; styli lineares, divergentes, indivisi; ovula in loculis solitaria. Capsula didyma, carnosa, indehiscens v. vix in coccos dorso 2-valves secedens. Semina ovoidea, strophiola carnosa interdum semen semitegente, testa crustacea; albumen carnosum; cotyledones planæ, latæ. — Arbores fruticesve glabri. Folia alterna, petiolata, lata, sæpius subtriangularia v. rhomboidea, integerrima, subtus sæpius glauca v. canescentia, pennivenia v. vix basi 3–5-plinervia. Racemi terminales, floribus ♂ numerosis sub quaque bractea pluribus parvis, ♀ sub quaque bractea solitariis ad basin racemi paucis v. rarius ad apices ramorum absque racemo ♂.

Species 7 v. 8, Archipelagi Malayani Australiæ et insularum maris Pacifici incolæ. *Baill. Etud. Euph. t.* 8. *Muell. Arg. in DC. Prod.* xv. ii. 1143 (*Carumbium,* excl. sect. *Pimeleodendron*). *Benth. Fl. Austral.* vi. 149 (*Carumbium*). *Bot. Mag. t.* 2780.

Dibrachion, *Regel, Gartenfl.* xv. (1866) 100, *t.* 504, species ex ins. Philippinarum a nobis non visa, foliis peltatis distinctissima, ex icone tamen et descriptione auctoris rite a Muellero ad *Carumbium* (*Homalanthum*) refertur, et huic generi restituenda est Wartmannia, *Muell. Arg. in Linnæa* xxxiv. 218, *et in DC. Prod.* xv. ii. 1147, ab auctore ob seminum strophiolam parvam separata, de cujus natura cfr. Baill. Adans. vi. 348. Embryo *H. populifolii* in icone Bot. Mag. l. c. minimus delineatur, in seminibus tamen a nobis examinatis dimidium albuminis longe superat.

177. **Pimeleodendron,** *Hassk. Hort. Bogor. Descr.* 68. (Stomatocalyx *et* Carumbii *sect.* Pimeleodendron, *Muell. Arg. in DC. Prod.* xv. ii. 1142, 1143.)—Flores dioici? apetali, ♀ ignoti. Fl. ♂: Calyx compressus, brevis, latus, lobis 2 brevissimis planis sibimet appressis. Discus 0. Stamina ∞ (12–15), intra marginem perianthii serie simplici disposita (ob calycis formam 2-serialia apparent), filamentis brevissimis; antheræ terminales, latæ, truncatæ, loculis extrorsum adnatis divergentibus longitudinaliter dehiscentibus. Ovarii rudimentum 0.—Arbores fruticesve glabri. Folia alterna v. ad apices ramorum conferta petiolis valde inæqualibus apice tumidis, ovata v. oblonga, integerrima, coriacea, penni-

venia. Racemi ♂ simplices v. ramosi, infra folia laterales v. nonnulli axillares. Flores apicem versus rhacheos sparsi, pedicellis brevibus rigide patentibus. Bracteæ caducissimæ.

Species 2 v. 3, Archipelagi Malayani incolæ. Speciem typicam Amboinensem non vidimus, sed descriptio fusior Hasskarlii quoad characteres genericos omnino *Stomatocalyci*, Muell. Arg., convenit. Specimina Borneensia a Muell. Arg. cum Malaccensibus juncta, nobis specifice differre videntur. Baillon, Hist. Pl. v. 229, genus totum in *Carumbio* (*Homalantho*) includit, nobis tamen, quoad plantam ♂ quæ sola nota, differre videtur habitu, inflorescentia et staminibus.

178. **Senefeldera**, *Mart. Herb. Fl. Bras.* 269.—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx parvus, longe ante anthesin apertus, breviter lateque 3–5-lobus v. lateralis subinteger. Stamina ∞ (3–12), receptaculo elevato affixa, filamentis brevissimis; antheræ subsessiles, erectæ, loculis extrorsum parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx alte 3-fidus v. 3-partitus, segmentis imbricatis. Ovarium 3-loculare; styli in columnam brevem crassam connati, superne recurvo-patentes, crassiusculi, indivisi; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves dissiliens, endocarpio duriusculo. Semina ex Muell. Arg. strophiolata, in speciminibus nostris estrophiolata, irregulariter subglobosa, testa tenuiter subcrustacea; albumen carnosum; cotyledones planæ, latæ.—Arbores tenues, glabræ. Folia alterna, petiolata, ampla, coriacea, integerrima, pennivenia. Spicæ ad apices ramorum paniculatæ, sæpius rubentes. Bracteæ breves, latæ. Flores ♂ sub quaque bractea paucæ, pedicello basi articulato brevissimo v. bracteam superante; ♀ in parte inferiore spicæ v. paniculæ ramorum sub quaque bractea solitarii, breviter pedicellati.

Species 4, Brasilianæ. *Muell. Arg. in. DC. Prod.* xv. ii. 1153, *et in Mart. Fl. Bras.* xi. ii. 529, *t.* 76. *Baill. Etud. Euph. t.* 9.

In *S. inclinata*, Muell. Arg., et in specie nova a Traillio in eadem regione Amazonica lecta, flores ♂ ad apicem pedicelli rhachin versus inclinati, perianthio valde obliquo quasi dimidiato integerrimo squamulam latam formante extrorsum suberecto, sed characteres cæteri et habitus omnino specierum typicarum e Brasilia Janeiriensi.

179. **Trisyngyne**, *Baill. Adans.* xi. 136.—Flores monoici, apetali. Fl. ♂: Calyx tubulosus, membranaceus, apice 4–5-dentatus. Stamina 15–20, centralia, filamentis liberis subulatis erectis; antheræ lineares, subapiculatæ, basifixæ, demum exsertæ, introrsum 2-rimosæ. Fl. ♀: Sepala? 2, parva, libera. Ovarium 2-loculare. Styli in columnam crassitudine ovarii cylindraceam erectam alte connati, apice recurvi, indivisi, intus stigmatosi; ovula in loculis solitaria (descendentia?). Fructus . . .—Frutices. Folia alterna, petiolata, integerrima, pennivenia, Flores e gemma axillari v. folio delapso laterali oriundi, ♂ in cymulas pedunculatas sæpius 3-floras dispositi, singuli in axilla squamæ scariosæ inserti. Flores ♀ altius ramulo tenui inserti, alterne glomerulati, glomerulis 3-floris extus bracteis bracteolisque cinctis; glandulæ 2, compressæ, ad glomerulum laterales. (*Char. ex Baill.*)

Species 2, Novo-Caledonicæ. Genus adhuc imperfecte notum, forte ex ordine expellendum.

180. **Omphalea**, *Linn. Gen. n.* 1039. (Duchola, *Adans. Fam.* ii. 357. Omphalandria, *P. Br. Hist. Jam.* 335. Ronnowia, *Buch. Pl. Nouv. Découv.* 6, *t.* 4. Hecatea, *Thou. Hist. Veg. Isles Afr.* 27, *t.* 5. Hebecocca, *Beurl. in K. Vetensk. Akad. Stockh. Handl.* 1854, 146.)—Flores monoici, apetali. Discus obscurus v. 0. Fl. ♂: Sepala 4–5, parva, lata, valde imbricata. Stamina 2–3, filamentis in columnam brevissimam connatis; antherarum connectiva crassa, lata, in massam peltatam pileiformam margine 2–3-lobam connata, loculis ad peripheriam dissitis, juxta margines loborum extrorsum adnatis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx fere maris. Ovarium 2–3-loculare, in columnam stylarem crassam pubescentem obtusam v. brevissime 2–3-lobam abiens; ovula in loculis solitaria. Fructus crassus, 2–3-dymus, extus carnosus, endocarpio duro indehiscente v. demum in coccos 2-valves dissiliens. Semina subglobosa, estrophiolata; albumen crassum, carnosum; cotyledones latæ, planæ.—Frutices volubiles

v. alte scandentes, rarius arbores diffusæ. Folia alterna, petiolo apice 2-glanduloso, sæpius ampla, integerrima, pennivenia, et basi sæpe 3-5-nervia. Flores cymulosi, cymulis ♂ v. cum flore centrali ♀ androgynis, secus ramos paniculæ terminalis dispositis. Bracteæ in axi paniculæ sub cymulis sæpe elongatæ, subfoliaceæ, lineari-spathulatæ, petiolatæ.

Species 8, quarum una Madagascariensis, cæteræ Americæ tropicæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1135, *et in Mart. Fl. Bras.* xi. ii. 514, *t.* 72. *Baill. Etud. Euph. t.* 7. *Aubl. Pl. Gui. t.* 328. *Lodd. Bot. Cab. t.* 519.

Semina matura non vidimus et character supra ex Baill. et Muell. Arg. datus. Buchoz l. c. embryonem describit globosum e cotyledonibus 2 crassis constantem et pellicula tenui involutum.

181. **Ophthalmoblapton,** *Fr. Allem. Tract. Rio Jan.* 1849, *cum ic.*—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx parvus, vertice depressus, in alabastro clausus, per anthesin apice brevissime 2–3-lobus v. altius valvatim fissus. Stamen 1, e fundo calycis, filamento exserto; anthera erecta, loculis parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Sepala 6, ovata, crassiuscula, sub-2-seriatim imbricata. Ovarium 3-loculare, in stylum longum crassum columnarem superne crassum et breviter 3-lobum abiens; ovula in loculis solitaria. Capsula depressa, tridyma, in coccos 2-valves dissiliens, exocarpio tenui, endocarpio osseo. Semina ovoidea, testa crustacea extus celluloso-spongiosa; albumen carnosum; cotyledones planæ, latæ.—Arbores proceræ. Folia alterna, ad apices ramorum conferta, petiolo longo apice tumido, ampla, integerrima v. parce dentata, coriacea, pennivenia. Spicæ ♂ axillares v. infra folia laterales, breves, bracteis brevissimis latis; flores sub quaque bractea ∞, arcte sessiles et subconfluentes, collateraliter 1–3-seriatim radiantes. Flores ♀ ad basin spicarum v. ad nodos distinctos solitarii v. pauci, sessiles v. pedicello brevi crasso fulti.

Species 3 v. 4, Brasilianæ. *Muell. Arg. in DC. Prod.* xv. ii. 1155, *et in Mart. Fl. Bras.* xi. ii. 532, *t.* 103. Flores ♂ haud rite examinare potuimus, sed optime ab Allemao illustrati sunt. *O. pedunculare,* Muell. Arg., a cæteris speciebus differt habitu, foliis breviter petiolatis minus coriaceis et ex descriptione Muelleri notis pluribus aliis et forte e genere excludenda est. Specimen nostrum jam defloratum est.

182. **Hippomane,** *Linn. Gen. n.* 1088. (Mancinella, *Tuss. Fl. Antill.* iii. 21, *t.* 5, *ex Muell. Arg.*)—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx parvus, membranaceus, breviter 2–3-fidus, lobis imbricatis. Stamina 2, filamentis in columnam demum breviter exsertam connatis, apice brevissime liberis; antheræ erectæ, loculis ovoideis contiguis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx parvus, alte 3-fidus. Ovarium -∞ (6–9-) loculare; styli breves, basi in columnam connati, superne breviter liberi recurvi indivisi stellato-patentes; ovula in loculis solitaria. Drupa majuscula, indehiscens, carne crassa, endocarpio crassissimo osseo ∞-loculari. Semina (a nobis non visa) estrophiolata; albumen carnosum; cotyledones planæ, latæ.—Arbor glabra, succo copioso lacteo vehementer venenoso. Folia alterna, longe petiolata, lata, integerrima v. leviter serrata, pennivenia, reticulata. Spicæ terminales, rhachi crassiuscula. Bracteæ dissitæ, basi utrinque glandula peltata instructæ. Flores ♂ sub quaque bractea 3–∞, subsessiles; ♀ sub bracteis infimis solitarii pariter subsessiles; in spicis nonnullis deficientes v. tardius evoluti.

Species 1, in maritimis Indiæ occidentalis, Americæ centralis et Columbiæ crescens. *Muell. Arg. in DC. Prod.* xv. ii. 1200. *A. Juss. Euph. Tent. t.* 16. *Baill. Etud. Euph. t.* 6. *Nutt. Sylv.* i. *t.* 60. *Regel Gartenfl. t.* 510.

183. **Maprounea,** *Aubl. Pl. Gui.* 895, *t.* 342. (Ægopricon, *Linn. f. Suppl.* 63.)—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx parvus, membranaceus, breviter 3-lobus, lobis imbricatis. Stamina 2, rarius 1 v. 3, per anthesin exserta, filamentis in columnam connatis apice brevissime liberis; antheræ erectæ, loculis ovoideis contiguis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx brevis, 3-lobus. Ovarium 3-loculare; styli in columnam connati, apice breviter liberi, patentes, indivisi;

ovula in loculis solitaria. Capsula globosa, vix tridyma, in coccos 2-valves dissiliens, columella sæpissime cum coccis decidua. Semina oblique obovoidea, superne oblique sub strophiola magna carnosa depressa, testa crustacea extus glanduloso-foveolata (v. lævi?); albumen carnosum (perfectum non vidimus); cotyledones planæ, latæ.—Frutices glabri, ramosissimi. Folia alterna, petiolata, parvula, ovata, integerrima, penninervia et reticulato-venulosa, subtus sæpe secus costam v. venas primarias glandulis depressis 2–5 instructa. Spicæ ♂ densæ capituliformes, ovoideæ v. subglobosæ, ad apices ramorum pedunculatæ, solitariæ v. in pedunculo ramoso paucæ. Bracteæ parvæ, imbricatæ, basi glandulosæ. Flores minimi, sub quaque bractea terni, sessiles. Flores ♀ 1–3 in pedunculo infra spicam ♂ v. in ramo ipso pedicellati, sub bractea parva solitarii.

Species 3, Americæ et Africæ inter tropicos incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1190, *et in Mart. Fl. Bras.* xi. ii. 542, *t.* 81. *A. Juss. Euph. Tent. t.* 17. *Gærtn. Fruct. t.* 138 (*Ægopricon*). *Sm. Ic. ined. t.* 42 (*Ægopricon*). *Baill. Etud. Euph. t.* 7. *A. St. Hil. Pl. Us. Bras. t.* 65.

Genus naturalissimum inflorescentia facile distinctum. Seminum sub strophiola depressionem in generibus affinibus nunquam observavimus.

184. **Stillingia**, *Linn. Mant. n.* 1279.—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx parvus, tenuiter membranaceus, brevissime et late 2–3-fidus. Stamina 2, rarissime 3, filamentis liberis exsertis; antherarum loculi ovoideo-globosi, distincti, contigui, paralleli, longitudinaliter dehiscentes. Ovarii rudimentum 0. Fl. ♀: Calyx 3-partitus v. rudimentarius v. 0. Ovarium 2–3-loculare; styli basi breviter in columnam connati, superne patentes breves v. longiusculi indivisi; ovula in loculis solitaria. Capsula 2–3-dyma, in coccos 2-valves dissiliens, columellam nullam reliquens, sed, pericarpii basi inter coccos persistente, receptaculum divaricato-3-cornutum induratum remanet. Semina subglobosa, strophiolata v. estrophiolata, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Frutices glabri. Folia alterna v. rarius opposita, breviter petiolata, integerrima v. glanduloso-denticulata. Spicæ terminales, simplices, bracteis brevibus latis 2-glandulosis. Flores ♂ sub quaque bractea sæpius 3, subsessiles, ♀ sub bracteis inferioribus solitarii, sessiles v. brevissime pedicellati, in spica pauci v. interdum spica omnino ♂.

Species enumeratæ 13, Americæ borealis et australis, ins. Mascarensium et maris Pacifici incolæ, nonnullæ tamen adhuc dubiæ. *Muell. Arg. in DC. Prod.* xv. ii. 1156, *et in Mart. Fl. Bras.* xi. ii. 538, *t.* 76.

Genus quale a Muellero definitum certe *Sapio* valde affine, sed character e receptaculo post coccos delapsos indurato-3-cornuto absque columella persistente in ordine singularis est, in *S. sylvatica*, Linn., ex America boreali, et in *S. lineata* ex ins. Mascariensium insignis, in *S. dichotoma*, Muell. Arg., e Brasilia minus prominens, nec in ullo alio genere nisi in nimis affini *Adenopeltide* observatur.

Gymnostillingia, *Muell. Arg. in Linnæa* xxxii. 89, *et in DC. Prod.* xv. ii. 1163, species 2 e Mexico et America centrali, ab auctore distinguitur perianthio ♀ (præter bracteam et bracteolas) 0 et seminibus estrophiolatis, sed etiam in specie typica *Stillingiæ* (*S. sylvatica*), calycis ♀ segmenta intra bracteam sæpe rudimentaria v. vix ulla, et seminum strophiola characterem nullum certum præbet.

Stillingia heterodoxa, Muell. Arg., e Brasilia, fruticulus stellato-tomentosus, spicis gracilibus axillaribus, perianthiis ♂ 3-partitis, floribus ♀ ignotis, characteres *Sebastianiæ* v. *Excæcariæ* potius quam *Stillingiæ* præbet.

Stillingia lineata var. *densiflora*, Baker, Fl. Maurit. 314, ex ins. Seychelles, est *Excæcariæ* species nova, inflorescentia floribus et fructu omnino *E. Agallochæ*, sed folia multo majora coriacea nitidaque *Stillingiæ lineatæ*.

185. **Sapium**, *P. Br., Hist. Jam.* 338. (Triadica, *Lour. Fl. Cochinch.* 610. Stillingfleetia, *Boj. Hort. Maurit.* 284. Carumbium, *Kurz, For. Fl. Brit. Burm.* ii. 411, *non Reinw.*)—Flores (an semper?) monoici, apetali. Discus 0. Fl. ♂: Calyx parvus, membranaceus, breviter et inæqualiter dentatus v. lobatus, apertus v. subimbricatus, demum sæpe ad basin valvatim 2–3-fissus. Stamina 2 v. 3, filamentis liberis; antherarum loculi ovoidei, distincti, contigui, paralleli, longitudinaliter dehiscentes. Ovarii rudimentum 0.

Fl. ♀: Calyx 3-fidus v. fere 3-partitus. Ovarium 2-3-loculare; styli distincti v. basi breviter connati, recurvo-patentes, indivisi; ovula in loculis solitaria. Capsula plus minus carnosa v. pulposa, in speciebus normalibus demum loculicide dehiscens, nec in coccos 2-valves dissiliens. Semina globosa, estrophiolata, in columella 3-alata post capsulam apertam sæpissime persistentia, testa crustacea extus sæpe pulposa; albumen carnosum; cotyledones planæ, latæ.—Arbores fruticesve sæpius glabri. Folia alterna, petiolata, integerrima v. rarius dentata, pennivenia, petiolo apice sæpe 2-glanduloso. Spicæ v. racemi terminales, solitarii v. in una specie ∞ paniculati. Flores ♂ sub quaque bractea sæpius 3, ♀ ad basin spicæ plures, sub quaque bractea solitarii, in spica solitarii v. 0. Bracteæ parvæ, sæpe basi utrinque glanduliferæ.

Species ad 25, per regiones calidiores utriusque orbis late dispersæ. *Muell. Arg. in DC. Prod.* xv. ii. 1202, *et in Mart. Fl. Bras.* xi. ii. 612, *t.* 84, 85 (*Excœcariæ* sect.). *Baill. Etud. Euph. t.* 5, 6. *Nutt. Sylv. t.* 62 (*Stillingia*). *Miq. Stirp. Surin. t.* 29. *A. Rich. Fl. Cub. t.* 69 (*Stillingia*).

Genus a Muellero et nuper a Baillono *Excœcariæ* adjunctum, sed nobis ab eo distinctius videtur quam *Sebastiania* aliaque a Muellero retenta. Calyx ♂ non 3-partitus *Stillingiæ*, et capsula constanter diversa. Præter species typicas quarum pistillum in Asiaticis sæpius 2-merum in Americanis 3-merum, *E. abyssinica* et *E. Manniana*, Muell. Arg. (forte unius varietates) flores et fructus omnino *Sapii* ostendunt.

S. indicum, Willd.; Wight, Ic. t. 1950, perianthio ♂ omnino *Sapii*, ab hoc genere uti ab omnibus affinibus differt fructu; capsula magna, globosa, dura, tandem in coccos clausos secedit, columella nulla persistente. *Sclerocroton ellipticum*, Hochst., species Africana in Prodromo ad *S. indicum* relata, ex speciminibus nostris cum fructu juniore ab illo longe differt, nec rite ab *Excœcaria reticulata*, Muell. Arg., distinguimus.

Falconeria, *Royle, Illustr. Himal. Pl.* 354, *t.* 84a (98); *Wight, Ic. t.* 1866, species v. varietates 2 includit, floribus ♂ *Sapii*, spicis unisexualibus utriusque sexus longis multifloris, fructu baccato, endocarpio in pyrenas 2 indehiscentes demum secedente, columella ut videtur persistente; fructus tamen fere omnes in speciminibus integri remanent. Hæc uti *S. indicum* nostro sensu multo melius sub *Sapio* quam sub *Excœcaria* militat.

Conosapium, *Muell. Arg. in Linnæa*, xxxii. 87, *et in DC. Prod.* xv. ii. 1154, species Madagascariensis a nobis non visa, a Baillono cum *Sapio* ad *Excœcariam* relata, ex charactere dato in omnibus cum *Sapio* convenit exceptis stylis a latere compressis. Stamina 3, centralia, receptaculo conico-acutato affixa dicuntur, quod vix differt a staminum filamentis basi connatis specierum nonnullarum aliarum. Fructu ignoto genus adhuc dubium remanet.

186. **Bonania,** *A. Rich. Fl. Cub.* iii. 201, *t.* 68.—Flores monoici (v. rarius dioici?) apetali. Discus 0. Fl. ♂: Calyx membranaceus, ore truncatus v. breviter lateque 2-3-lobus. Stamina 2, rarius 3, filamentis liberis brevibus; antheræ parvæ, loculis distinctis ovoideis contiguis parallelis. Ovarii rudimentum 0. Fl. ♀: Calyx alte 3-fidus. Ovarium 3-loculare; styli distincti v. vix basi connati, tenues, recurvo-patentes, indivisi; ovula in loculis solitaria. Capsula globosa, subtridyma, pericarpio carnoso in valvas 2-partitas potius quam in coccos dissiliens, columella persistente alata. Semina globosa, estrophiolata, columellæ sæpe adhærentia; embryo . . .—Fruticuli ramosissimi, glabri. Folia alterna, breviter petiolata, sæpe parvula, integerrima v. sæpius glanduloso-dentata v. serrulata. Racemi axillares, tenues. Flores ♂ sub quaque bractea sæpius 3, subsessiles, ♀ ad basin spicæ v. in alia axilla solitarii, sessiles v. pedicellati.

Species 6, Cubanæ, *Griseb. Cat. Pl. Cub.* 19, pleræque ad *Excœcariam* relatæ. *Muell. Arg. in DC. Prod.* xv. ii. 1212.

Genus quoad characteres *Sapio* valde affine sed habitu et inflorescentia longe differt. In speciebus typicis, *B. cubana*, A. Rich., *B. emarginata*, A. Rich., et *B. myricifolia* (*Excœcaria myricifolia*, Griseb.; Wright, n. 2007), flos ♀ ad basin spicæ ♂ in axilla arcte sessilis; in *Sapio adenodonte*, Griseb., *Excœcaria erythrosperma*, Griseb., et in specie inedita *Wright, n.* 3705, flos ♀ longe pedicellatus in eadem axilla ac spica ♂ v. in ramo (an in planta?) diverso. Hæ omnes characteres *Bonaniæ* ostendunt. In *Excœcaria Sagræi*, Muell. Arg. (Wright, n. 2006), cui errore quodam synon. *E. myrciæfolia*, Griseb., adducitur, spica terminalis videtur et capsula in coccos secedere et forte vera est *Excœcariæ* species, etsi calycis ♂ segmenta vix soluta videantur.

187. **Ditta,** *Griseb. in Mem. Amer. Acad. ser.* 2, viii. 160.—Flores dioici?, apetali, ♂

ignoti. Fl. ♀: Calyx minutus v. 0. Ovarium 2-loculare; styli 2, brevissimi, crassi, patentes, 2-lobi; ovula in loculis solitaria. Fructus in coccos (2-valves?) secedens v. abortu 1-coccus, pericarpio haud crasso. Semina globosa, testa aspera; embryo . . . —Frutex resinosus. Folia alterna, breviter petiolata, parvula, oblongo-lanceolata, coriacea, pennivenia, glandulis marginalibus subdentata. Flores ♀ parvi, ad axillas sessiles, solitarii v. gemini.

Species 1, Cubensis. *Muell. Arg. in DC. Prod.* xv. ii. 1138. Genus floribus masculis ignotis quoad affinitates valde incertum. Habitus *Bonaniæ*, sed styli valde diversi.

188. **Sebastiania**, *Spreng. Neue Entd.* ii. 118, *t.* 3. (Gussonia, *Spreng. l. c.* 119, *t.* 2.) —Flores monoici, apetali. Discus 0. Fl. ♂: Calyx minimus, membranaceus, jam ante anthesin apertus, inæqualiter 3–5-lobus v. partitus. Stamina 2 v. 3, rarissime 4, filamentis brevibus liberis v. vix basi connatis; antherarum loculi distincti, ovoidei, contigui, paralleli, longitudinaliter dehiscentes. Ovarii rudimentum 0. Fl. ♀: Calyx 3-partitus v. 3-lobus, ovario brevior. Ovarium 3-loculare, styli patentes v. revoluti, liberi v. basi brevissime connati, indivisi; ovula in loculis solitaria. Capsula tridyma v. subglobosa, in coccos 2-valves a columella centrali dissiliens, endocarpio crustaceo. Semina oblonga v. subglobosa, strophiolata, testa lævi; albumen carnosum; cotyledones planæ, latæ.—Frutices sæpius tenues, rarius herbæ. Folia alterna, sæpius parvula v. angusta, integerrima v. minute serrulata, vix coriacea, pennivenia. Racemi graciles, terminales v. simul axillares v. laterales. Flores ♂ minimi, sæpius sub quaque bractea 2–3, breviter pedicellati v. subsessiles; ♀ ad basin racemi v. in caule paullo inferius pauci sæpius singuli, distinctius pedicellati; racemi tamen interdum omnino ♂. Bracteæ minimæ, sub fl. ♀ utrinque glanduliferæ v. eglandulosæ.

Species ad 40, quarum una inter tropicos orbis veteris incola, una in civitatibus australioribus Americæ borealis reperitur, cæteræ omnes Americanæ tropicæ imprimis Brasilianæ, ex his tamen una etiam in Africa tropica occidentali invenitur. *Muell. Arg. in DC. Prod.* xv. ii. 1165, *et in Mart. Fl. Bras.* xi. ii. 545, *t.* 77 *ad* 80, exclusis tamen speciebus nonnullis ad *Gymnanthem* referendis.

Genera plurima in Prodromo cum *Gymnanthi*, Swartz, sub nomine Sprengeliano juncta, ibidem a *Stillingia* distinguuntur capsulæ columella persistente receptaculo non 3-cornuto, ab *Excæcaria* seminibus strophiolatis, melius tamen naturæ consentire videtur si *Gymnanthem* excludimus, et genera sequentia sola pro sectionibus retinemus. Genus ita reformatum *Excæcariæ* quam maxime affine, calyce et capsula conforme, differt inflorescentia ad normam (non tamen constanter) terminali et seminibus strophiolatis.

1. Ditrysinia, *Rafin. Neogenet.* 2. Species boreali-Americana (*S. ligustrina*) habitu fere *Stillingiæ*, characteribus omnino *Microstachyos* nisi perianthium fl. ♂ magis evolutum late et inæqualiter 3–5-lobum. Capsulæ cocci læves.

2. Microstachys, *A. Juss. Euph. Tent.* 48, *t.* 15. (Cnemidostachys, *Mart. Nov. Gen. et Sp.* i. 66, *t.* 40 *ad* 44, *antea in Reise* 206 *nomen tantum*. Elachocroton, *F. Muell. in Hook. Kew Journ.* ix. 17). Rami sæpius tenues. Spicæ terminales v. oppositifoliæ. Capsulæ cocci sæpius tuberculis 2 v. paucis muricati. *Vahl, Ecl. t.* 19 (*Tragia*). *Karst. Fl. Columb. t.* 117 (*Microstachys*). *Wawra in Pr. Maxim. Reise, Bot. t.* 44 (*Cnemidostachys*).

3. Sarothrostachys, *Klotzsch. in Wiegm. Archiv.* vii. 185. Spicæ pleræque tenues, breves, ad axillas ∞ fasciculatæ, nonnullæ tamen ad apices ramorum hornotinorum solitariæ terminales. Calyx ♂ omnino *Microstachyos*. Capsulæ cocci læves. Species paucæ Brasilianæ quarum una etiam in Africa tropica. *Wawra in Pr. Maxim. Reise, Bot. t.* 45.

4. Adenogyne, *Klotzsch in Wiegm. Archiv.* vii. 183. Spicæ terminales cum nonnullis axillaribus. Calyx ♂ quam in præcedentibus magis obliquus et inæqualis, late 2–3-fidus v. fere partitus, vix tamen unilateralis. Capsulæ cocci læves. Ramuli sæpe spinescentes. Species Americanæ tropicæ.

5. *Eusebastiania*. Spicæ terminales. Calycis ♂ segmenta 3, angusta v. acuminata v. brevissime basi sæpius dilatata et leviter connata, interdum fimbriata, semper parva non unilateralia. Capsulæ cocci læves. Species Americanæ tropicæ. Sprengel l. c. bracteas flores ♂ subtendentes pro calycibus descripsit et distinxit *Sebastianiam*, bracteis basi extus 2-glandulosis, et *Gussoniam*, bracteis eglandulosis.

189. **Excoecaria,** *Linn. Gen. n.* 1102. (Commia, *Lour. Fl. Cochinch.* 605.) — Flores dioici v. rarius monoici, apetali. Discus 0. Fl. ♂: Calycis segmenta 3 rarius 2, parva, distincta, subæqualia, angusta v. latiora et imbricata. Stamina 2–3, filamentis liberis; antherarum loculi distincti, ovoidei, paralleli, contigui, longitudinaliter dehiscentes. Ovarii rudimentum 0. Fl. ♀: Calyx 3-fidus v. 3-partitus. Ovarium 3-loculare; styli basi breviter connati, recurvo-patentes, indivisi; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves a columella persistente dissiliens, endocarpio crustaceo parum indurato. Semina globosa, estrophiolata, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Arbores fruticesve glabri. Folia alterna v. opposita, breviter v. longiuscule petiolata, integerrima v. parce dentata, sæpe coriacea, pennivenia, ampla v. mediocria. Racemi axillares laterales v. interdum simul subterminales, in axillis haud raro fasciculati, rarius fere omnes terminales. Flores ♂ sub quaque bractea solitarii v. rarius terni, sæpius breviter pedicellati, pedicello basi 2-bracteolato, ♀ ad basin racemi ♂ 1–2 v. sæpius in racemis distinctis pauci. Bracteæ parvæ, in spica ♂ juniore sæpe dense imbricatæ.

Species descriptæ fere 30 sed plurimæ reducendæ videntur, Asiæ et Africæ tropicæ et subtropicæ, ins. Mascarensium et Australiæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1213 (*sect.* 5 *ad* 7). *Benth. Fl. Austral.* vi. 152. *Kurz, For. Fl. Brit. Burm.* ii. 413. *Wight, Ic. t.* 1865. *Klotzsch in Pr. Waldem. Reise, Bot. t.* 21 (*Stillingia*).

Spirostachys, *Sond. in Linnæa* xxiii. 106 (*Excœcaria africana* et *E. melanosticta*, Muell. Arg.), nobis videtur ipsissima *E. Agallocha*, Linn., species typica dioica, foliis alternis, inflorescentia axillari, calycis ♂ segmentis angustis, et ab hac *Stillingia lineata* var. *densiflora*, Baker, non nisi foliis differt. In *E. oppositifolia* et in *E. cochinchinensi*, Lour. ex Muell. Arg., a qua *E. quadrangularis*, Muell Arg., non differre videtur, folia alterna, spicæ axillares simulque subterminales et flores ♀ interdum adsunt ad basin spicæ ♂. In *E. japonica*, Muell. Arg., *E. acerifolia*, F. Didrichs. (sect. *Protaxanthus*, Didrichs. in Vidensk. Meddel. Nat. For. Kjöbenh. 1857, 129), et *E. reticulata*, Muell. Arg. (Sclerocroton, *Hochst. in Flora* 1845, 85), folia alterna, spicæ pleræque subterminales, et præsertim in *E. japonica*, calycis segmenta latiora sed a basi distincta imbricataque et capsula in coccos dissiliens omnino *Excœcariæ* nec *Sapii*.

Species Americanas a Muellero in Fl. Bras. ad *Euexcœcariam* relatas in herbariis nostris haud agnovimus. *E. potamophila* ex ic. in Mart. Fl. Bras. xi. ii. t. 80, vix non *Sebastianæ* species est.

Tænosapium, *Muell. Arg. in DC. Prod.* xv. ii. 1200, est species Madagascariensis, a nobis non visa, prius ab auctore in *Excœcaria* inclusa et iterum ad hoc genus a Baillono relata, a cæteris *Excœcariis* separata ob stylos ut in *Conosapio* a latere valde compressis. Fructu ignoto genus adhuc dubium remanet.

190. **Gymnanthes,** *Sw. Prod. Fl. Ind. Occid.* 95. (Excoecaria, *Griseb. Fl. Brit. W. Ind.* 50; *Cat. Pl. Cub.* 20, *excl. sect.* Gymnosopsis.)—Flores monoici v. rarius dioici. Perianthium rudimentarium v. 0. Discus 0. Fl. ♂: Stamina 2, rarius 3, filamentis liberis v. basi breviter connatis; antheræ erectæ, ovoideæ, loculis parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Ovarium 3-loculare; styli liberi v. basi brevissime connati, recurvi, indivisi; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves a columella persistente dissiliens. Semina globosa, strophiolata v. rarius nuda, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Frutices glabri. Folia alterna, petiolata, integerrima, coriacea, pennivenia. Racemi axillares v. ad nodos vetustos, rarius simul terminales, solitarii v. fasciculati. Bracteæ parvæ, nunc minutæ v. obsoletæ, sæpe basi introrsum præsertim sub fl. ♀ bracteolis v. glandulis 2 comitatæ. Flores ♂ sæpius 1–3-ni, intra bracteam pedicellati, bractea rarius pedicello adnata; ♀ ad basin racemi 1–2 v. in racemo distincto ∞, sub quaque bractea solitarii.

Species ad 10, Indiæ occidentalis incolæ, quarum 1 v. 2 etiam in America australi tropica inveniuntur, pleræque a Grisebachio l. c. in *Excœcaria*, a Muell. Arg. in DC. Prod. xv. ii. 1175, in *Sebastiania* inclusæ, ab utroque genere satis distinctæ videntur calyce ♂ omnino deficiente v. rarius ad squamellam minutissimam reducto. In fl. ♀ interdum vix certum est an squamellæ 3 minutæ inæquales pro bractea cum bracteolis ut in *Gymnostillingia*, Muell. Arg., v. pro perianthio rudimentario habendæ.

Excœcaria (*Dactylostemon*) *polyandra*, Griseb., a Muellero ex ordine rejecta ob florem herma-

phroditum semel observatum, nobis videtur vera *Gymnanthis* species, fasciculo florum diandrorum ab auctore pro flore unico polyandro descripto. Filamenta sæpius a basi libera, cujusve floris vix distincta, interdum tamen per paria plus minus coalita sunt, et in fasciculis nonnullis magis evolutis bractea 2-glandulosa sub pare adest. Flos hermaphroditus a Muellero Prod. p. 1226 descriptus est forte fasciculus florum magis evolutus flore centrali fœmineo.

191. **Actinostemon,** *Klotzsch in Wiegm. Archiv.* vii. 184. (Dactylostemon, *Klotzsch l.c.* 181.)—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx 0. Stamina ∞ (usque ad 16 rarius 2-3), filamentis liberis; antheræ ovoideæ, erectæ, loculis distinctis parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx 0 v. e squamellis 1-3 minutis. Ovarium 3-loculare; styli basi in columnam tenuem brevem v. longiusculam connati, superne liberi, recurvo-patentes, indivisi; ovula in loculis solitaria. Capsula in coccos 2-valves dissiliens, collumella persistente. Semina subglobosa, strophiolata, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Frutices glabri v. gemmis innovationibusque sericeis. Folia alterna, breviter petiolata, vix v. demum coriacea, integerrima, penninvenia. Racemi terminales v. axillares, solitarii v. pauci, e gemmis squamis siccis imbricatis deciduis obtectis oriundi. Flores ♂ minimi, pedicello filiformi fulti, sub bracteis minimis sæpius 2-3-ni; ♀ solitarii, longe pedicellati.

Species enumeratæ 24, Americæ tropicæ imprimis Brasiliæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1192 *ad* 1199, *et in Mart. Fl. Bras.* xi. ii. 591 *ad* 611, *t.* 82, 83.

Genus habitu, gemmis floriferis squamatis, sæpeque stylo, facile distinctum, cæterum *Gymnanthi* valde affine. Mueller Arg. *Dactylostemon* ab *Actinostemone* distinguit calyce ♀ evidentius evoluto et embryone transverso nec verticali, calyx tamen semper minutus v. rudimentarius in utraque serie specierum evolvitur v. deest. Semina raro in herbariis adsunt, plura tamen *Dactylostemonis verticillati*, Kl., examinavimus ubi embryonem sæpius transversum invenimus, interdum vero valde obliquum, et hic solus character haud sufficiens videtur ad genera cæterum simillima separanda.

192. **Adenopeltis,** *Bert.*; *A. Juss. in Ann. Sc. Nat. ser.* 1, xxv. 24.—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx 0. Stamina 2, rarius 3, filamentis basi breviter connatis; antheræ erectæ, loculis ovoideis parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum 0. Fl. ♀: Calyx 0. Ovarium 3-loculare; styli liberi v. vix basi connati, patentes, tenues, indivisi; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves dissiliens, columellam nullam relinquens, sed pericarpii basi inter coccos persistente, receptaculum divaricato-3-cornutum induratum remanet. Semina subglobosa, estrophiolata, testa crustacea; albumen carnosum; cotyledones planæ, latæ.—Frutex glaber, *Stillingiæ* simillimus. Folia alterna, breviter petiolata, glanduloso-denticulata, penninvenia. Spicæ terminales v. in axillis superioribus simplices, bracteis latis basi intus 2-glandulosis. Flores ♂ sub quaque bractea solitarii v. rarius 2-3-ni, subsessiles; ♀ ad basin spicæ 1-2 sub bracteis solitarii, glandulæ ad bracteas ♂ peltatæ, stipitatæ, basi nudæ v. parce fimbriatæ, ad bracteas ♀ fimbriato-multifidæ.

Species 1, Chilensis, vix a *Stillingia* distinguenda floribus etiam ♂ perianthio omnino orbatis. *Muell. Arg. in DC. Prod.* xv. ii. 1164. *Baill. Etud. Euph. t.* 7.

193. **Colliguaja,** *Molin. Hist. Chil. ed. angl.* i. 291 (*male*).—Flores monoici, apetali. Discus 0. Fl. ♂: Calyx e squamellis 1-2 minutis v. sæpius 0. Stamina 2-3, filamentis brevibus liberis; antheræ ovatæ, loculis contiguis parallelis longitudinaliter 2-valvibus. Ovarii rudimentum 0. Fl. ♀: Calycis squamellæ 2-3, parvæ, bracteolas simulantes. Ovarium 3-loculare; styli basi breviter connati, superne patentes, lineares, crassiusculi; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves a columella 3-alata dissiliens, endocarpio duro. Semina subglobosa, testa crustacea indurata; albumen carnosum; cotyledones latæ, planæ.—Frutices habitu *Stillingiæ*. Folia alterna v. passim opposita, brevissime petiolata, integerrima v. glanduloso-denticulata v. serrulata, coriacea, venis præter costam parum conspicuis. Racemi terminales. Flores ♂ ad quamque bracteam ∞, ob pedunculum bracteæ adnatum bracteæ ipsæ inserti videntur, alii sessiles uno sæpe pedicellato florem unicum polyandrum simulant, sæpe tamen ut in *Gymnanthe polyandra* (*Excœcaria*, Griseb.) squamellæ minutæ 1-2 adsunt sub filamentis floris pedicellati. Flores

♀ ad basin racemi 1–2 sæpius nec semper adsunt sessiles, sub bractea solitarii. Capsula majuscula.

Species 5, Americæ australis extratropicæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1226, *et in Mart. Fl. Bras.* xi. ii. 631, *t.* 85. *Hook. Bot. Misc. t.* 39, 40. *Deless. Ic. Sel.* iii. *t.* 88. *Baill. Etud. Euph. t.* 7.

194. **Dalembertia,** *Baill. Etud. Euph.* 545, *t.* 5, *et Adans.* xi. 124.—Flores monoici, apetali. Discus 0. Fl. ♂ : Calyx 0 v. ad squamellam unicam (bracteam?) reductus. Stamen 1; antheræ loculi distincti, adnati, contigui, paralleli, longitudinaliter dehiscentes. Ovarii rudimentum 0. Fl. ♀ : Sepala 3, parva, imbricata, basi 2-glandulosa (bractea cum bracteolis?). Ovarium 3-loculare; styli basi in columnam connati, superne recurvi indivisi; ovula in loculis solitaria. Capsula tridyma, in coccos 2-valves a columella persistente dissiliens, endocarpio duro. Semina globosa, estrophiolota, testa crustacea; albumen et embryo normalia?—Suffrutices glabri v. pilis simplicibus vestiti. Folia alterna, petiolata, rhombea, repando-dentata v. lobata, rarius subintegerrima, basi 3–5-nervia. Racemi terminales, pedunculati, floribus ♂ ∞ (ternatim pedicellatis?), ♀ ad basin racemi masculi v. in ramo diverso solitariis.

Species 4, Mexicanæ. *Muell. Arg. in DC. Prod.* xv. ii. 1225. Ex his *D. platanoides*, Baill., sola nobis adest floribus fœmineis et fructu. Char. fl. ♂ ex Baill. l. c.

195. **Hura,** *Linn. Gen. n.* 1087; *Hort. Cliff. t.* 34.—Flores monoici, apetali. Discus 0. Fl. ♂ : Calyx membranaceus, breviter cupulatus, margine truncatus denticulatus. Stamina ∞ (8–20), filamentis cum connectivis continuis in columnam crassam apice depressam loculos superantem connatis; antherarum loculi distincti, extrorsum adnati, paralleli, in verticillos 2–4 infra apicem columnæ dispositi, longitudinaliter dehiscentes. Ovarii rudimentum 0. Fl. ♀ : Calyx coriaceus, late cupulatus, truncatus, integerrimus, ovarium laxe cingens. Ovarium 5–20-loculare; styli in columnam longam carnosam alte connati, apice radiato-patentes, indivisi; ovula in loculis solitaria. Capsula magna, depressa, coccis verticillatis lignosis demum a columella crepitu dissilientibus. Semina a latere compressa, estrophiolata, testa crustacea; albumen carnosum; cotyledones latæ, planæ.—Arbores proceræ. Folia alterna, petiolata, lata, crebre pennivenia et transversim venulosa. Spicæ ♂ ad apices ramorum pedunculatæ, oblongæ, crassæ, floribus sessilibus confertis sub quaque bractea solitariis. Bracteæ membranaceæ, primum alabastrum involventes clausæque, per anthesin irregulariter ruptæ. Flores ♀ in axillis summis v. sub spica ♂ solitarii, pedicello crasso fulti.

Species 2 v. 3, Americanæ tropicæ, quarum una inter tropicos orbis veteris diu culta interdum inquilina dicitur. *Muell. Arg. in DC. Prod.* xv. ii. 1229. *et in Mart. Fl. Bras.* xi. ii. 632, *t.* 86. *Baill. Etud. Euph. t.* 6.

196. **Algernonia,** *Baill. in Ann. Sc. Nat. ser.* 4, ix. 198; *Etud. Euph.* 546, *t.* 2. (Tetraplandra, *Baill. in Ann. l. c.* 200; *Etud. Euph.* 549, *t.* 5.)—Flores monoici, apetali. Discus 0. Fl. ♂ : Sepala 3, minima, imbricata (an bractea cum bracteolis?). Stamen 1, filamento basi v. supra basin articulato (an infra articulationem pedicellus dicendum?); antheræ loculi distincti, connectivo crassiusculo lateraliter adnati in alabastro, profunde sulcati subdidymi, in flore aperto sæpius longitudinaliter 2-partiti, anthera aperta in loculos 4 cruciatim æquidistantes longitudinaliter dehiscentes divisa (an stamina 2 filamentis in columnam connatis antheris circa apicem sessilibus 2-locularibus?); rarius in flore aperto anthera unica 2-locularis. Ovarii rudimentum 0. Fl. ♀ : Calyx 3-fidus v. 3-partitus, lobis segmentisve latis imbricatis. Ovarium 3-loculare; styli in columnam connati, superne recurvo-patentes, papillosi v. fimbriati, indivisi; ovula in loculis solitaria. Capsula medio circumcirca horizontaliter angulata v. varie alata, matura nobis ignota, ex Muell. Arg. in coccos 2-valves dissiliens, seminibus subglobosis lævibus estrophiolatis.—Frutices glabri. Folia alterna, longiuscule v. breviter petiolata, in ramulis sæpe conferta, integerrima v. parce dentata, pennivenia, nitidula et siccitate sæpe fuscescentia. Spicæ ♂ terminales, tenuiter amentiformes. Bracteæ membranaceæ longitudinaliter

adnatæ, supra flores juniores arcte clausæ, per anthesin irregulariter longitudinaliter ruptæ. Flores (i.e. stamina) sub quaque bractea exserti ad 3, secus rhachin superpositi. Flores ♀ ad basin spicæ 1–2, intra bracteam basi 2-glandulosam solitarii, subsessiles, bracteolis 2 sæpius stipati.

Species 4, Brasilianæ. *Muell. Arg. in DC. Prod.* xvi. ii. 1230, *et in Mart. Fl. Bras.* xi. ii. 536, *t.* 87, *et* 534, *t.* 104 (*Algernonia et Tetraplandra*).

Tetraplandra ab *Algernonia* ab auctoribus distinguitur anthera 4-locellata. Specimina nostra, sat numerosa, fere omnia spicas ♂ nondum apertas proferunt, et in his omnibus utriusque generis antheras similes vidimus, 2-loculares apparent, loculis vix distincte in locellos divisis. In uno solo specimine *A. brasiliensis* stamina bene exserta vidimus, antheris cruciatim 4-locellatis, in altero specimine *A. obovatæ*, Muell. Arg., antheræ subexsertæ, aliæ 4-locellatæ aliæ 2-locellatæ. Spicarum ♂ structura alterius in vivo scrutanda. Genus interea in integrum servatum naturalissimum est et bracteis aliisque notis facillime distinguendum.

197. **Pera**, *Mutis in K. Vetensk. Akad. N. Handl. Stockh.* v. (1784), 299, *t.* 8. (**Perula**, *Schreb. Gen. Pl.* 703.)—Flores dioici v. rarius monoici, apetali, ∞ in involucris calyciformibus globosis per anthesin latere hiantibus v. valvatim 2-fidis inclusi. Discus 0. Fl. ♂: Calyx parvus, valvatim 2–3-fidus v. rudimentarius v. 0. Stamina 2–6, filamentis ima basi v. alte connatis; antheræ basi v. altius dorsifixæ, loculis parallelis contiguis longitudinaliter dehiscentibus. Ovarii rudimentum intra flores ♂ 0, sed interdum cum floribus ♂ in involucro 3–4. Fl. ♀: Calyx 0, nisi ad squamellam minutam reductus. Ovarium 3-loculare; stylus brevissimus; stigmate crassiusculo peltato disciformi v. obtuse 3-lobo in vertice ovarii subsessili; ovula in loculis solitaria. Capsula globosa v. pyriformis, pericarpio duro, in valvas 3 2-fidas dehiscens, septis præter columellam centralem 3-alatam evanidis. Semina ovoidea v. obovato-compressa, testa crustacea nitida nigra; albumen crasso-carnosum; cotyledones planæ, latæ.—Arbores fruticesve glabri v. pubescentes. Folia alterna, breviter petiolata, integerrima, coriacea, penninervia. Involucra sæpius pisiformia, ad axillas foliorum v. ad nodos vetustos glomerata, breviter pedicellata v. subsessilia, ad apicem pedicelli 1–2-bracteolata. Flores in involucro sessiles, 2–4 v. interdum ♂ 6–8.

Species descriptæ 20, Americæ tropicæ incolæ. *Muell. Arg. in DC. Prod.* xv. ii. 1025, *et in Mart. Fl. Bras.* xi. ii. 423, *t.* 61.

Klotzsch in Wiegm. Archiv. vii. 178 genus in 4 dividit, scil.:—1. Schismatopera (*P. distichophylla*), involucro ♂ 1-bracteato ovarii rudimenta 3–4 cum floribus ♂ includente, filamentis in columnam tenuem connatis apice breviter liberis. 2. Pera (*P. arborea*), involucro ♂ 2-bracteato ovarii rudimenta 3–4 cum floribus ♂ includente, filamentis brevibus planis liberis. 3. Spixia, *Leandr. Sacram. in Denkschr. K. Acad. Wiss. Munch.* vii. 231, *t.* 13 (*P. Leandri*) involucro ♂ 2-bracteolato ovarii rudimenta cum floribus ♂ includente, filamentis tenuibus basi breviter connatis. 4. Peridium, *Schott in Spreng. Syst. Cur. Post.* 410, involucris ♂ ovarii rudimentorum orbatis. Hæc genera admittit Mueller Argoviensis pro sectionibus, cum sectione nova *Diplopera*, specie a nobis non visa, involucris perfecte androgynis; et *Peridium* in sectiones 2 dividit; *Neopera*, Griseb., perianthio in floribus ♂ evoluto, et *Peridium* perianthio omnino deficiente.

Inter species Prodromi v. Fl. Brasiliensis, *P. echinocarpa*, Baill. Adans. v. 223, a nobis non visa, et specimine fructifero sola nota, est forte *Chætocarpi* species. *P. decipiens*, Muell. Arg., ad *P. bicolorem* restituenda, nam specimina eadem a Rob. Schomburgkio numeribus 685 et 686, et a fratre Rich. Schomb. numeribus 1070 et 1071, designata fuerunt. Sub *P. distichophylla* statio 'Ceara, *Gardner n.* 918' error est pro 'Guiana, *Schomburgk n.* 918.'

Semina a Klotzschio exalbuminosa dicuntur cotyledonibus crassis carnosis, a Baillonio ad normam albuminosa cotyledonibus latis planis. Matura in herbariis perrara sunt, duo tantum (*P Leandri*) examinavimus, in uno albumen perfectum carnosum bipartibile invenimus, embryonem tamen haud deteximus; in altero albumen et embryonem statu perfecto vidimus. Plura *P. glabratæ* aperimus adhuc immatura, sed embryo jam intra albumen adhuc tenuius formatus fuit.

Ordo CLII. BALANOPSEÆ.

Flores dioici, ♂ in spicis amentaceis sparsi, breviter pedicellati v. subsessiles. *Perianthium* (v. bracteola ?) ad apicem pedicelli e squama unica unilaterali. *Stamina* ∞ (2–12 sæpius 5–6) filamentis brevissimis v. 0. *Antheræ* in toro subsessiles, ovatæ, loculis 2 parallelis dorso contiguis, rima longitudinali latiuscule 2-valvibus, connectivo interdum in acumen minutum producto. *Ovarii* rudimentum 0 v. rarius in flore terminali minutum, 2-partitum. Fl. ♀, intra involucrum e bracteis ∞-seriatim imbricatis solitarii, sessiles. *Perianthium* 0. *Ovarium* sessile, placentis 2 parietalibus imperfecte 2-loculare; apice in stylos 2 fere ad basin 2-partitos desinens, ramis stigmatosis longe subulatis flexuosis. *Ovula* in quaque placenta 2, collateralia, a basi erecta, anatropa, funiculis brevibus supra micropylem in obturatorem dilatatis. *Drupa* involucro persistenti insidens, ovoidea v. oliviformis, 2-pyrena v. abortu 1-pyrena; epicarpium subcoriaceum, nitidum; mesocarpium succulentum; pyrenæ, si duæ, facie plana sese applicitæ, dorso convexæ, duriusculæ v. osseæ. *Semina* in quaque pyrena solitaria, a basi erecta, subsessilia, pyrenæ conformia; testa membranacea. *Albumen* carnosum. *Embryo* albumine paullo brevior, rectus, cotyledonibus late ovatis v. oblongis planis tenuibus v. crassiuscule carnosis, radicula tereti infera.

Arbores fruticesve. Folia alterna v. sparsa, sæpe subverticillatim approximata, coriacea, integerrima v. rarius leviter denticulata, pennivenia. Stipulæ 0. Amenta mascula et flores fœminei in ramulis annotinis v. vetustioribus infra folia sparsa, sessilia. Bracteæ squamiformes, ∞-seriatim imbricatæ, ad basin amenti ♂ minimæ, caducissimæ, sub flore ♀ ab exterioribus in interiores gradatim increscentes, sub fructu v. post drupas delapsas persistentes; bracteæ præterea minutæ glanduliformes in rhachi amenti ♂ plures. Bracteola ad quemque florem a Baillono memorata nobis potius, uti supra, perianthii rudimentum videtur.

Species 6 v. 7, omnes Novo-Caledonicæ.

Ordo e genere unico constans, a Baillono dubie ad *Castaneas* suas (*Cupuliferas*) relatus, characteribus pluribus essentialibus abhorret. Nobis *Euphorbiaceis* multo affinior videtur. Flores masculi omnino *Daphniphylli*; ovula in loculis ovarii gemina collateralia, funiculi obturator, fructus drupaceus, embryo in albumine carnoso rectus, stylorum conformatio et habitus conveniunt, sed a toto ordine differt ovulis seminibusque a basi erectis nec ab apice pendulis.

1. **Balanops**, *Baill. Adans.* x. 117, 337; *Hist. Pl.* vi. 237, *f.* 207 *ad* 213.—Genus unicum. Character ordinis.

Species uti supra 6 v. 7, quarum examinavimus flores ♂ in sp. 2, fructus in sp. 3. Flores fœmineos non vidimus, eorum characteres ex descr. Bailloni excerpsimus.

Ordo CLIII. URTICACEÆ.

Ulmaceæ, Celtideæ, Moreæ, Artocarpeæ, Urticaceæ et Cannabineæ, Endl. Gen. 275 ad 286. Urticaceæ, Moraceæ et Artocarpaceæ, Lindl. Veg. Kingd. 260 ad 271; et Ulmaceæ, Lindl. l.c. 580. Ulmaceæ, Baill. Hist. Pl. vi. 137.

Flores unisexuales v. rarius polygami, regulares v. reductione irregulares. *Perianthium* simplex, calycinum, sæpius parvum, lobis segmentisve imbricatis valvatisve, v. in flore ♀ sæpe subclausum foramine terminali parvo, v. arcte adnatum v. 0. *Discus* hypogynus obscurus v. 0. Fl. ♂: *Stamina* tot quot perianthii lobi iisque opposita et interdum basi adnata, rarissime lobis pauciora v. aliquanto plura; filamenta inter se libera v. rarissime basi connata. *Antheræ* ovatæ v. oblongæ, basifixæ v. sæpius prope basin dorsifixæ, loculis

2 distinctis oblongis v. curvulis, parallelis v. leviter divergentibus, rima longitudinali extrorsum lateraliter v. introrsum dehiscentibus. *Ovarii* rudimentum 0 v. plus minus evolutum. Fl. ♀: *Staminodia* rara. *Ovarium* superum v. in paucis generibus plus minus inferum, uniloculare, e carpello unico constans. *Stylus* primum terminalis, mox tamen carpello oblique accreto sæpius excentricus v. fere lateralis, indivisus 2-fidus v. 2-partitus; stigma unicum, in stylo indiviso terminale v. obliquum v. plus minus uno latere decurrens, in stylo diviso ramos ambos introrsum a basi continuiter vestiens. *Ovulum* unicum v. rarissime altero mox abortiente comitatum, nunc basi v. prope basin affixum, erectum v. adscendens, orthotropum v. brevissime amphitropum, nunc apice v. sub apice affixum, pendulum, anatropum v. breviter amphitropum, micropyle semper supera. *Fructus* indehiscens, monospermus, sæpius parvus, nunc achænium siccum carnosulum v. succulentum liberum v. perianthio inclusum v. adnatum, nunc drupa libera, nunc fructus plures receptaculo carnoso plus minus immersi v. id obtegentes in syncarpium connati v. arcte conferti. *Semen* erectum, pendulum, v. lateraliter affixum, pericarpio subconforme, testa membranacea v. rarissime crustacea. *Albumen* 0, v. tenue embryonem involvens, rarius copiosius carnosum unilaterale v. inter plicas embryonis intrusum. *Embryo* nunc rectus v. curvus, cotyledonibus æqualibus carnosis, radicula brevi v. minima supera, nunc plus minus curvus, cotyledonibus varie inæqualibus v. plicatis v. involutis, radicula supera v. sursum incurva incumbente.

Arbores frutices v. herbæ, habitu vario. Folia alterna v. rarius opposita, integerrima dentata lobata v. palmatim partita nec pinnata et rarissime pinnatifida. Stipulæ nunc laterales distinctæ, nunc in unam intrapetiolarem connatæ, gemmam terminalem sæpe includentes, mox deciduæ cicatricem transversam v. annularem relinquentes, rarius in generibus paucis oppositifoliis utrinque in unam interpetiolarem connatæ. Inflorescentia primaria centripeta, axillaris v. ad nodos vetustos, nec unquam terminalis; ultima ad normam centrifuge cymulosa, interdum vero cymulis ad florem unicum reductis undique centripeta. Cymulæ dum pluriflorae in glomerulos seu capitula confertæ v. laxe 2-3-chotomæ, in pedunculo axillari solitariæ v. secus rhachin simplicem v. ramosam plures sessiles v. pedicellatæ, in spicam densam v. interruptam, in racemum v. in paniculam dispositæ, v. interdum flores in receptaculo carnoso densissime conferti cymulis vix v. non distinguendis. Bracteæ sæpius parvæ v. 0, interdum vero 2–4 v. plures ad basin glomeruli v. capituli imbricatæ. Bracteolæ sub quoque flore sæpius minimæ v. 0, interdum conspicuæ v. etiam flores occultantes.

Species bene notæ vix ultra 1500, per regiones calidiores temperatasque utriusque orbis late dispersæ, et tribus nostræ, ab auctoribus nonnullis pro ordinibus propriis habitæ, omnes utrique orbi communes sunt. *Ulmeæ* et *Cannabineæ* pleræque extratropicæ, *Urticeæ* etiam plurimæ et paucæ inter *Celtideas* et *Moreas* extra tropicos vigent, pleræque tamen ex his tribubus, et *Artocarpeæ* et *Conocephaleæ* fere omnes, inter tropicos limitatæ sunt.

Ordo optime limitatus, nulli inter *Polypetalas* arcte affinis. Weddell cum *Tiliaceis* comparat, sed nostro sensu characteribus primariis perianthii andrœcii et gynœcii longe distat. Inter *Monochlamydeas Euphorbiaceis* propius accedit, pro maxima parte tamen differt staminibus segmentis lobisve perianthii isomeris iisque oppositis, pistillo monocarpico, albumine tenui v. 0. Hi characteres tamen hinc inde etiam in *Euphorbiaceis* adsunt, etsi non omnes in eodem genere. Stamina perianthii segmentis opposita et isomera in pluribus *Phyllantheis*, pistillum monocarpicum in *Eremantho* et in *Macarangis* nonnullis, semen exalbuminosum v. albumine tenui in *Actephila*, *Discocarpo*, *Hevea*, *Simmondsia*, aliisque. *Urticaceæ* nonnullæ, imprimis e tribubus 1 ad 4, ab auctoribus pluribus dicarpicæ dicuntur, stylis 2 plus minus distinctis, ovario a' ortu 1-loculari; nostro sensu tamen stylus semper unicus, sed more stylorum plurium *Euphorbiacearum* sæpe alte 2-fidus, ramis a basi stigmatosis nec stigmata distincta ferentibus.

FORMÆ ABNORMES.

Flores fertiles nonnulli v. plerique hermaphroditi in *Ulmeis*, in generibus pluribus e *Celtideis*, et interdum in *Parietaria*.

Stamina ∞ in *Ampelocera* et *Thelygono*, in quoque flore solitaria in *Forskohleis* et in generibus pluribus *Artocarpearum*, numerosa squamis intermixta nec in flores distinctos segregata, capitulum

formantia in *Pseudolmedia Castilloa* et *Parartocarpo*; spicam in *Sahagunia* et *Clarisia*. Antheræ lineares in *Thelygono*.

Stylus latus, plano-compressus, cum ovario continuus in *Phyllestyle*, fere basilaris in *Thelygono*. Pistilla abortiva florum ♂ filiformia longe exserta stylos perfectos simulantia in *Helicostyle*.

Albumen sat copiosum carnosum in *Tremis* paucis, in *Parasponia*, *Cannabineis*, *Moro*, *Bosquiea*, *Sceptrocnide*, *Distemone?*, *Cypholopho*, *Parietaria*, *Thelygono*, et hinc inde in speciebus perpaucis aliorum generum.

CONSPECTUS TRIBUUM.

* *Ovulum pendulum.*

Tribus I. Ulmeæ. Flores plerique hermaphroditi, *gemmis floriferis in ramis annotinis aphyllis* rarius demum in ramum foliatum excrescentibus. Antheræ ab initio erectæ. Fructus non drupaceus. Embryo rectus, cotyledonibus planis v. longitudinaliter complicatis.

Tribus II. Celtideæ. Flores unisexuales v. nonnulli hermaphroditi, ad axillas cymosi v. solitarii. Antheræ ab initio erectæ. Fructus drupaceus. Embryo curvus, cotyledonibus varie plicatis v. involutis.

Tribus III. Cannabineæ. Flores dioici, masculi paniculati, fœminei sessiles. Antheræ ab initio erectæ. Achænium parvum.

Tribus IV. Moreæ. Flores unisexuales. Antheræ in alabastro reversæ, filamentis inflexis.

Tribus V. Artocarpeæ. Flores unisexuales, masculi v. utriusque sexus in receptaculo carnoso numerosi, rarissime racemosi. Antheræ ab initio erectæ.

** *Ovulum erectum, orthotropum.*

Tribus VI. Conocephaleæ. Flores unisexuales. Antheræ 4–5, ab initio erectæ. Arbores fruticesve.

Tribus VII. Urticeæ. Flores unisexuales v. rarissime pauci hermaphroditi. Antheræ 1-5, in alabastro reversæ, filamentis inflexis. Embryo rectus.

Tribus VIII. Thelygoneæ. Flores unisexuales. Antheræ ∞, ab initio erectæ. Herbæ. Embryo curvus.

Succus in tribubus 4, 5 et 6 sæpius, in cæteris nunquam (v. rarissime?), lactescens. Tribus omnes in utroque orbe terrarum vigent. Genera herbacea in *Cannabineis*, *Urticeis*, et *Thelygoneis* adsunt, perpauca in *Moreis*, nulla in cæteris tribubus.

CONSPECTUS GENERUM.

Tribus I. Ulmeæ. Arbores inermes. Gemmæ floriferæ ad nodos ramorum annotinorum sessiles, fasciculum prodeuntes aphyllum v. rarius demum in ramum foliatum excrescentem. Flores in fasciculo inferiores sæpius masculi, superiores, rarius omnes, fertiles sæpissimeque hermaphroditi. Staminum filamenta recta v. vix apice inflexa, antheris jam in alabastro erectis. Ovarium sessile v. stipitatum; stylus plus minus excentricus, ramis stigmatosis 2 subæqualibus indivisis; ovulum ex apice pendulum, anatropum v. brevissime amphitropum. Fructus compressus, apice obliquus, siccus v. tenuiter carnosus, sæpe alatus v. appendiculatus. Embryo rectus, cotyledonibus æqualibus latis planis v. longitudinaliter complicatis.

1. Ulmus. Fructus stipitatus, ala lata cinctus. Cotyledones planæ. Folia serrata.—*Utriusque orbis hemisph. bor.*

2. Holoptelea. Fructus stipitatus, ala lata cinctus. Cotyledones longitudinaliter complicatæ. Folia arboris adultæ integerrima.—*Ind. or.*

3. Phyllostylon. Ovarium sessile, cum stylo lato plano-compresso falcato v. late divaricato-bilobo continuum. Folia serrata.—*Brasilia.*

4. Planera. Fructus exalatus, undique subcarnoso-muricatus. Cotyledones planæ. Folia serrata. Florum fasciculi post anthesin in ramum foliatum excrescentes.—*Amer. bor.*

Tribus II. Celtideæ. Arbores rarius frutices, inermes v. spinis axillaribus armatæ. Flores in ramis hornotinis axillares, cymosi fasciculati v. fertiles solitarii, unisexuales v. fertiles hermaphroditi. Staminum filamenta recta v. vix apice inflexa, antheris jam in alabastro erectis. Ovarium sessile v. rarius stipitatum; stylus centralis (v. in *Zelkova* excentricus), ramis stigmatosis 2 subæqualibus indivisis v. rarius divisis; ovulum apice v. sub apice affixum, pendulum, anatropum v. brevissime amphitropum. Fructus globosus v. ventricosus, drupaceus, endocarpio duro. Embryo curvus, cotyledonibus varie plicatis incurvis v. involutis, radicula sursum incumbente v. ascendente.

* *Flores fertiles sæpe hermaphroditi. Cotyledones latissimæ.*

5. ZELKOVA. Perianthium ♂ breviter lobatum. Stylus excentricus. Fructus dorso sæpius carinatus, interdum carinam versus attenuatus. Folia a basi pennivenia; stipulæ laterales, liberæ.—*Creta, Asia temp. occid. et or.*

6. AMPELOCERA. Perianthium 4–5-fidum. Stamina 10–16. Stylus centralis. Drupa globosa, exalata. Cotyledones contortuplicatæ. Folia a basi pennivenia.—*Chile, Cuba.*

7. CELTIS. Perianthii ♂ segmenta imbricata. Stylus centralis. Fructus æqualis, exalatus. Folia basi 3-nervia; stipulæ laterales, liberæ.—*Utriusque orbis reg. temp. et trop.*

8. PTEROCELTIS. Perianthii ♂ segmenta imbricata. Stylus centralis. Fructus æqualis, ala lata cinctus. Folia basi 3-nervia; stipulæ laterales, liberæ.—*Mongolia v. China bor.*

** *Flores fertiles sæpe hermaphroditi. Embryo involutus, cotyledonibus angustis.*

9. TREMA. Perianthii ♂ segmenta induplicato-valvata. Stylus centralis. Folia trinervia; stipulæ laterales, liberæ.—*Utriusque orbis reg. calid.*

10. PARASPONIA. Perianthii ♂ segmenta valde imbricata. Stylus centralis. Folia trinervia; stipulæ in unam intrapetiolarem connatæ.—*Archip. Malay., ins. Pacif.*

*** *Flores omnes unisexuales. Embryo involutus, cotyledonibus angustis.*

11. APHANANTHE. Perianthii ♂ segmenta valde concava fere induplicata. Folia 3-nervia; stipulæ laterales, liberæ.—*Archip. Malay., Austral., Japonia.*

12. GIRONNIERA. Perianthii ♂ segmenta valde imbricata. Folia a basi pennivenia; stipulæ in unam intrapetiolarem connatæ v. arcte convolutæ.—*Zeylania, Archip. Malay., China, ins. Pacif.*

13. CHÆTACME. Perianthii ♂ segmenta induplicato-valvata. Folia a basi tenuiter pennivenia; stipulæ in unam oppositifoliam caducissimam connatæ.—*Afr. austr. et trop.*

Tribus III. Cannabineæ. Herbæ erectæ v. scandentes. Flores dioici, axillares, masculi paniculati, fœminei sessiles conferti v. strobilacei. Staminum filamenta brevia, antheræ erectæ. Ovarium bractea obtectum; stylus centralis 2-partitus, ramis filiformibus; ovulum pendulum. Achænium parvum, siccum.

14. HUMULUS. Caulis alte scandens, foliis oppositis. Spicæ fructiferæ strobiliformes, bracteis membranaceis laxe imbricatis. Embryo spiraliter involutus.—*Hemisph. bor. reg. temp.*

15. CANNABIS. Caulis erectus, foliis alternis v. imis oppositis digitatim dissectis. Achænia bracteis obtecta, ad axillas conferta. Embryo curvus, cotyledonibus crasso-carnosis subæqualibus rectis.—*Asia centr., alibi culta v. inquilina.*

Tribus IV. Moreæ. Arbores fruticesve sæpius lactescentes v. rarius herbæ. Flores unisexuales, inflorescentia nunc fere *Celtidearum* nunc *Artocarpearum*. Staminum filamenta in alabastro inflexa, antheris reversis, per anthesin elastice porrecta, exserta, antheris erectis. Stylus sæpius excentricus, indivisus v. 2-fidus, parte stigmatosa v. ramis stigmatosis filiformibus; ovulum apice v. sub apice affixum, pendulum, anatropum v. breviter amphitropum. Fructus varius.

Subtribus 1. Fatoueæ. *Cymulæ axillares, laxiusculæ, masculæ v. androgynæ. Flores ♀ solitarii v. in cymulis androgynis pauci.*

16. PSEUDOSTREBLUS. Cymulæ pleræque masculæ, rarius androgynæ. Flores ♀ sæpius solitarii. Perianthii ♀ segmenta valde imbricata, ovarium arcte cingentia. Cotyledones latæ, contortuplicatæ. Arbores. Folia integerrima, a basi pennivenia.—*Khasiya, Penang.*

17. BLEEKRODIA. Cymulæ pleræque androgynæ. Perianthium ♀ tubulosum, 4-dentatum, ovarium includens. Cotyledones carnosæ, altera crassiuscula, altera minima squamiformi. Arbores. Folia integerrima, a basi pennivenia.—*Madagasc., Borneo.*

18. FATOUA. Cymulæ densæ, androgynæ. Perianthii ♀ segmenta 5, valvata. Cotyledones latæ, æquales. Herba. Folia serrata, sub-3-nervia.—*Archip. Malay., Austral. trop., ins. Pacif., China, Japonia.*

Subtribus 2. Strebleæ. *Flores ♂ capitati spicati v. racemosi, ♀ solitarii v. in pedunculo 2–4 pedicellati.*

19. TAXOTROPHIS. Flores ♂ breviter racemoso-spicati, bracteis minimis. Perianthii ♀ segmenta ovario et fructu breviora. Cotyledones (an semper?) contortuplicatæ. Frutices sæpe spiniferi. Folia pennivenia, parce dentata.—*Zeylania. Archip. Malay.*

20. PHYLLOCHLAMYS. Flores ♂ capitato-spicati, spica bracteis ∞ involucrata. Perianthii ♀ segmenta foliacea, ovario et fructu multo longiora. Cotyledon altera crassissima alteram minimam includens. Frutices v. arbores sæpius spiniferi. Folia paucidentata, pennivenia.—*Ind. or.*, *Timor.*

21. STREBLUS. Flores ♂ capitato-glomerati, capitulo 2-bracteato. Perianthii ♀ segmenta valde imbricata, ovarium includentia. Cotyledon altera crassissima alteram parvam includens. Arbor v. frutex inermis. Folia subdentata, pennivenia.—*Asia trop.*

22. MAILLARDIA. Flores ♂ minimi, densissime cylindraceo-spicati, bracteis peltatis obtecti. Perianthium ♀ basi adnatum, ovatum, minute 4-dentatum, bracteis 2–3-seriatis stipatum. Cotyledon altera crassissima alteram parvam includens. Arbor inermis. Folia integerrima, coriacea, crebre et parallele pennivenia.—*Ins. Borbonia.*

Subtribus 3. Broussonetieæ. *Flores ♂ spicati racemosi v. capitati, ♀ globoso-capitati. Ovarium perianthio inclusum.*

* *Perianthium ♀ breviter v. vix dentatum. Genera gerontogea.*

23. MALAISIA. Spicæ ♂ densiusculæ. Capitula ♀ parvula. Perianthium ♀ vix dentatum. Fructus solitarii v. pauci, receptaculo multibracteato majores. Cotyledon altera crassissima alteram minimam includens. Frutices inermes. Folia subintegerrima, a basi pennivenia.—*Archip. Malay.*, *Austral. trop.*, *ins. Pacif.*

24. BROUSSONETIA. Spicæ ♂ amentiformes. Capitula ♀ parvula. Perianthium ♀ dentatum. Fructus e perianthio exsertus, crasse stipitatus. Cotyledones æquales. Arbores inermes. Folia basi 3-nervia, integra v. 3–5-loba, serrulata.—*Archip. Malay.*, *Asia or.*, *alibi inquilina.*

25. ALLÆANTHUS. Spicæ ♂ longæ, angustæ, densæ. Capitula ♀ parvula. Perianthium ♀ dentatum. Fructus perianthium non excedens. Cotyledones latæ, valde corrugato-plicatæ. Arbores inermes. Folia integerrima v. serrulata, a basi pennivenia.—*Zeylania*, *ins. Philippin.*

26. PLECOSPERMUM. Capitula utriusque sexus globosa, parvula. Perianthia ♀ vix dentata, fructifera carnosa v. succulenta, in syncarpium globosum concreta v. arcte conferta. Frutices spiniferi. Folia integerrima, a basi pennivenia.—*Ind. or.*, *Afr. trop. or.*

** *Perianthium ♀ alte 4-fidum v. partitum. Genera Americana v. Africana.*

27. BAGASSA. Spicæ ♂ cylindraceæ, densissimæ. Capitula ♀ majuscula. Perianthia ♀ 4-fida, fructifera carnosula receptaculo carnoso insidentia, in pseudosyncarpium globosum densissime conferta. Cotyledones æquales. Arbores inermes. Folia *opposita*, lata, 3-nervia, integra v. 3-loba.—*Guiana*, *Bras. bor.*

28. CHLOROPHORA. Spicæ ♂ amentiformes. Capitula ♀ globosa v. oblonga. Perianthia ♀ 4-fida v. 4-partita, fructifera carnosula, receptaculo carnoso insidentia, in pseudosyncarpium globosum v. oblongum densissime conferta. Cotyledones æquales. Arbores inermes v. spiniferæ. Folia integerrima v. dentata, a basi pennivenia.—*Amer. et Afr. trop.*

29. MACLURA. Racemi ♂ breves, laxi. Capitula ♀ majuscula. Perianthia ♀ alte 4-fida, fructifera receptaculo carnoso plus minus immersa, in syncarpium magnum globosum alte concreta. Cotyledones æquales. Arbor spinifera. Folia integerrima, a basi pennivenia.—*Amer. bor.*

Subtribus 4. Eumoreæ. *Flores utriusque sexus spicati, spicis (interdum in eodem genere) brevibus densissimis v. elongatis laxisque. Arbores v. frutices inermes.*

* *Perianthi ♀ segmenta 4, distincta, valde imbricata.*

30. PACHYTROPHE. Spicæ amentiformes. Perianthia fructifera succulenta, fructum includentia. Ovulum placentæ valde dilatatæ affixum. Folia integerrima, crebre et parallele pennivenia.—*Madagasc.*

31. PARATROPHIS. Spicæ laxæ, breves v. longæ. Perianthia ♀ minima, sub fructu exserto persistentia. Cotyledones latissimæ, contortuplicatæ. Folia crenata v. subintegerrima, pennivenia.—*Nov. Zel.*, *ins. Pacif. et Philippin.*

32. PSEUDOMORUS. Spicæ ♂ amentiformes, breves v. longæ, ♀ breves, densæ. Perianthia ♀ parva, sub fructu exserto persistentia. Cotyledones carnosæ, majore minorem fovente. Folia integerrima v. denticulata, a basi pennivenia.—*Australia*, *ins. Norfolk.*

33. MORUS. Spicæ breves v. longæ. Perianthia fructifera succulenta, fructum includentia.

Cotyledones æquales. Folia dentata, basi 3-nervia, integra v. 3-loba.—*Utriusque orbis hemisph. bor. et mont. trop.*

34. Ampalis. Spicæ breves. Perianthia fructifera carnosa, fructum includentia. Cotyledones æquales. Folia integerrima, a basi pennivenia.—*Madagasc.*

** *Perianthium ♀ tubulosum, ore 4-dentato.*

35. Trophis. Spicæ ♂ laxæ v. interruptæ, ♀ breves pauciflora. Perianthium ♀ basi ovario adnatum, fructiferum pericarpio arcte coacretum.—*Ind. occid., Amer. trop. Andin., Mexico.*

Subtribus 5. Dorstenieæ. *Flores ♂ in receptaculo lineari explanato v. turbinato densissime conferti, ♀ in eodem receptaculo solitarii rari v. numerosi.*

36. Sloetia. Receptaculum lineare, uno latere nudum, cæterum floribus ♂ densissime obtectum, spicam cylindraceam formans. Flores ♀ masculis majores, hinc inde inter masculа sparsi, v. spicæ omnino ♂. Perianthium ♀ 4-partitum. Arbor inermis. Folia integerrima, pennivenia.—*Archip. Malay.*

37. Dorstenia. Receptaculum explanatum, rarius in lacinias lineares divisum, floribus utriusque sexus in stratum carnosum superficiem vestientem connatis.—Herbæ perennes v. frutices parvi inermes. Folia varia.—*Amer. et Afr. trop.*; *cum una specie Asiatica.*

38. Trymatococcus. Receptaculum junius cylindraceum v. turbinatum, fructiferum urceolato-globosum. Flos ♀ in fundo unicus, ♂ ad oram receptaculi marginales numerosi. Perianthium ♀ cum receptaculo arcte concretum, ore parvo dentato. Arbores fruticesve inermes. Folia integerrima, pennivenia.—*Amer. et Afr. trop.*

Tribus V. Artocarpeæ. Arbores fruticesve sæpissime lactescentes. Flores unisexuales, parvi v. minuti, in receptaculo carnoso unisexuali v. androgyno sæpissime numerosi densèque conferti v. ♀ solitarii, in generibus paucis ultimis laxius spicati v. racemosi. Staminum filamenta recta v. vix apice inflexa, antheris jam in alabastro erectis. Stylus sæpius excentricus, indivisus v. 2-fidus, stigmate vario; ovulum apice v. sub apice affixum, pendulum, anatropum v. breviter amphitropum. Fructus sæpe receptaculo carnoso sepulti.

Subtribus 1. Ficeæ. *Receptacula carnosa globosa v. obovoidea, ore parvo introrsum bracteato, flores numerosos arcte includentia. Folia varia. Embryo curvus cotyledonibus variis.*

39. Ficus. Receptacula etiam fructifera clausa, sæpissime androgyna, rarius floribus dioicis unisexualia.—*Reg. calid. utriusque orbis.*

40. Sparattosyce. Receptacula demum rupta, varie explanata, floribus dioicis.—*Nov. Caledon.*

Subtribus 2. Brosimeæ. *Receptacula androgyna, floribus ♂ numerosis, ♀ in centro receptaculi unico. Folia a basi pennivenia. Embryo ubi notus ut in* Olmedieis.

41. Brosimum. Flores ♂ superficiem exteriorem receptaculi globosi obtegentes, perianthio cupulato v. a receptaculo vix distincto. Stamen 1 (rarius 2?). Floris ♀ perianthium nullum distinctum. Ovarium receptaculo inclusum, semiadnatum.—*Amer. trop.*

42. Lanessania. Flores ♂ apicem explanatum receptaculi anguste turbinati obtegentes, perianthio tubuloso. Stamina 2, rarius 3. Floris ♀ perianthium nullum distinctum. Ovarium in fundo receptaculi adnatum.—*Bras. bor.*

43. Bosqueia. Flores ♂ faciem interiorem receptaculi campanulati v. obconici obtegentes, perianthio 0. Stamina bracteolis intermixta. Floris ♀ perianthium nullum distinctum. Ovarium in fundo receptaculi adnatum.—*Afr. trop. Madagasc.*

44. Scyphosyce. Flores ♂ in fundo receptaculi parvuli tubuloso-cupulati ∞-seriatim inclusi, perianthio anguste tubuloso. Stamen 1. Floris ♀ perianthii segmenta 2 distincta, semet et ovarium liberum involventia.—*Afr. trop.*

Subtribus 3. Olmedieæ. *Receptacula unisexualia, bracteis ∞-seriatim imbricatis involucrata. Folia a basi pennivenia. Embryo rectus, cotyledonibus non plicatis, radicula parva supera.*

* *Flores ♀ in receptaculo suo solitarii, ♂ numerosi.*

45. Antiaris. Perianthii ♂ segmenta et stamina 4 rarius 3. Ovarium et fructus receptaculo adnata, absque perianthio distincto.—*Ind. or., Archip. Malay.*

46. OLMEDIA. Perianthii ♂ lobi v. segmenta et stamina 4. Perianthium ♀ ovoideum v. globosum, foramine parvo pertusum, ovarium et achænium includens.—*Amer. austr. trop.*

47. PSEUDOLMEDIA. Stamina numerosa, squamis numerosis intermixta nec in perianthiis distinctis inclusa. Perianthium ♀ ovoideum v. tubulosum, foramine parvo pertusum, ovarium et achænium includens.—*Ind. occid., Amer. trop. andin. et centr.*

** *Flores utriusque sexus in receptaculis suis numerosi v. plures.*

48. CASTILLOA. Stamina numerosa, squamis numerosis intermixta, nec in perianthiis distinctis inclusa. Perianthium ♀ ovoideum, 4-lobum, e receptaculo exsertum. Ovarium inclusum, hinc adnatum. Perianthia fructifera receptaculo insidentia nec concreta.—*Amer. centr., Cuba.*

49. HELICOSTYLIS. Perianthii ♂ segmenta et stamina 4. Perianthium ♀ basi receptaculo immersum concretumque, limbo 4-partito. Ovarium inclusum, hinc adnatum. Perianthia fructifera cum receptaculo in syncarpium ∞-locellatum plus minus concreta.—*Reg. Amazon., Guiana.*

50. PERREBEA. Perianthii ♂ segmenta et stamina 4. Perianthium ♀ tubulosum, 4-dentatum. Ovarium inclusum, fere undique adnatum. Perianthia fructifera carnosa, arcte conferta at distincta.—*Amer. trop.*

51. NOYERA. Flores ♂ ignoti. Perianthii limbus 4–6-dentatus v. ad basin in segmenta 4–6 divisus. Ovarium inferum, receptaculo sepultum. Perianthia fructifera superne aucta carnosaque et distincta. Achænia locellis receptaculi inclusa et fere undique adnata.—*Bras. bor., Guiana.*

Subtribus 4. Euartocarpeæ. *Inflorescentiæ unisexuales, basi nudæ v. bracteis 3–4 stipatæ, capituliformes spiciformes v. rarius racemiformes, v. ♀ rarius unifloræ. Folia a basi penninervia, rarius pinnatifida.*

52. HELIANTHOSTYLIS. Capitula ♂ globosa, pistillis sterilibus filiformibus longe exsertis. Flores ♀ solitarii, globosi, carnosi.—*Bras. bor.*

53. CUDRANIA. Capitula utriusque sexus globosa, perianthii segmentis staminibusque 4. Ovarium inclusum, liberum. Perianthia fructifera carnosula, in pseudosyncarpium conferta nec concreta. Frutices sæpe spiniferi.—*Asia trop.*

54. TRECULIA. Capitula utriusque sexus globosa (magna), receptaculo bracteis multifidis flores includentibus undique obtecto. Perianthii ♂ dentes v. lobi et stamina 2–4. Perianthium ♀ 0. Fructus syncarpio v. pseudosyncarpio 1–∞-seriatim inclusi.—*Afr. trop.*

55. PARARTOCARPUS. Capitula utriusque sexus globosa (parvula). Stamina in ♂ bracteolis peltatis intermixta absque perianthio. Perianthium ♀ e bracteolis emersum, tubuloso-clavatum, foramine parvo. Ovarium inclusum, liberum.—*Borneo.*

56. ARTOCARPUS. Capitula utriusque sexus globosa oblonga v. crasse cylindracea, interdum magna. Perianthia ♂ 2–4-mera, 1-andra, ♀ tubulosa, basi receptaculo immersa concretaque. Syncarpium perianthiorum apicibus distinctis areolatum v. echinatum v. perianthiis omnino concretis continuum.—*Asia trop., ins. Pacif., Afr. trop.?, alibi inquilina.*

57. BATOCARPUS. Spicæ ♂ ignotæ. Capitula ♀ globosa, perianthiis confertis carnosis truncatis ovarium liberum includentibus, fructiferis cum receptaculo continuis in syncarpium carnosum dense confertis.—*Columbia.*

58. SAHAGUNIA. Spicæ ♂ anguste cylindraceæ, staminibus cum bracteolis receptaculum lineare hinc nudum cæterum densissime obtegentibus. Capitula ♀ globosa, perianthiis ovoideis ovarium liberum includentibus, fructiferis in receptaculo parvo prominentibus distinctis.—*Amer. trop. a Brasilia ad Mexicum.*

59. CLARISIA. Spicæ ♂ anguste cylindraceæ, staminibus cum bracteolis receptaculum lineare hinc nudum cæterum densissime obtegentibus. Flores ♀ racemosi, secus rhachin gemini, pedicellati, perianthio ovoideo basi adnato. Ovarium inferum.—*Bras., Peruvia.*

60. BALANOSTREBLUS. Spicæ ♂ anguste cylindraceæ, perianthiis 4-meris 4-andris receptaculum lineare hinc nudum cæterum densissime obtegentibus. Flores ♀ racemosi, perianthio ovoideo basi adnato. Ovarium semi-inferum.—*Ind. or.*

61. SOROCEA. Racemi v. spicæ utriusque sexus laxi, floribus dissitis sessilibus v. pedicellatis. Perianthia ♂ 4-mera, 4-andra, ♀ basi adnata, ovoidea. Ovarium inferum.—*Amer. trop. a Brasilia ad Mexicum.*

Tribus VI. Conocephaleæ. Arbores fruticesve sæpius lactescentes. Flores unisexuales

densa spicati glomerato-capitati v. rarius dissiti, spicis capitulisque ♂ in pedunculo ∞ sæpius numerosis, ♀ paucioribus solitariisve. Staminum filamenta recta v. vix apice inflexa, antheris jam in alabastro erectis. Perianthium ♀ foramine minuto pertusum v. rarius 4-fidum. Stylus indivisus stigmate penicillato peltato v. lineari; ovulum basi v. prope basin affixum, erectum, orthotropum v. breviter amphitropum.

Tribus *Artocarpeas* cum *Urticeis* arcte connectens. Flores ♂ priorum, ♀ et fructus potius *Urticearum*.

62. Cecropia. Flores utriusque sexus densissime cylindraceo-spicati, spicis intra bracteam spathiformem deciduam 2–60. Folia peltata, radiatim 7–13-loba v. partita.—*Amer. trop.*

63. Myrianthus. Inflorescentia ♂ repetito-ramosissima, floribus in ramulis ultimis breviter oblongo-spicatis. Capitula ♀ solitaria, globosa. Folia argute dentata, indivisa v. 3–5-partita v. lobata.—*Afr. trop.*

64. Musanga. Inflorescentia ♂ repetito-ramosissima, floribus in ramulis ultimis globoso-capitatis. Flores ♀ minuti, numerosissimi, in massam ovatam v. obovatam conferti. Folia radiatim ∞-partita.—*Afr. trop.*

65. Coussapoa. Capitula utriusque sexus globosa, ♂ parvula sæpius dichotome paniculata; ♀ solitaria v. pauca, sæpe majora. Stigma capitato-penicillatum. Folia indivisa, integerrima, pennivenia v. 3-nervia.—*Amer. trop.*

66. Conocephalus. Capitula utriusque sexus globosa, ♂ sæpius parva confertim paniculata. ♀ solitaria v. pauca, majora v. magna. Stigma lineare. Folia indivisa, integerrima, pennivenia v. rarius 3-nervia.—*Ind. or., Archip. Malay.*

67. Pourouma. Inflorescentia utriusque sexus cymosa, floribus ♂ in cyma glomerulatis ♀ dissitis. Ovulum lateraliter supra basin affixum, ascendens micropyle supera. Fructus sæpius pro ordine magni, erecti, distincti. Folia indivisa v. palmatim 3–5-fida v. partita.—*Amer. trop.*

Tribus VII. Urticeæ. Herbæ frutices v. rarius arbores. Flores unisexuales rarissime (in *Parietaria*) polygami, glomerati sparsi v. in receptaculo carnosulo v. explanato conferti, rarius in involucro pauci v. solitarii, glomerulis floribusve ad axillas cymosis paniculatis v. confertis sessilibusque. Staminum filamenta in alabastro inflexa antheris reversis, per anthesin porrecta exserta antheris erectis; antheræ ovatæ. Stylus indivisus, stigmate capitato-penicillato v. plus minus elongato; ovulum basi v. juxta basin affixum, erectum v. adscendens, orthotropum v. brevissime amphitropum. Achænium parvum.

In hujus tribus ordinatione Monographiam egregiam Weddellii (Parisiis 1856) in Prodromo Candolleano perfectam fere undique secuti sumus. Cystolithæ, a Weddellio præcipue commentatæ, in hac tribu præ aliis conspicuæ, in *Fleurya* et in *Procridibus* plurimis lineares sunt, in *Myriocarpo* insigniter radiantes, in generibus cæteris punctiformes v. hinc inde oblongæ v. fusiformes, vix tamen in eodem genere semper conformes.

Subtribus 1. Ureræ. *Herbæ frutices v. rarius arbores, pilis urentibus v. stimulis sæpissime armati. Flores cymulosi, ♂ 4–5-meri rarius 2–3-meri, ovarii rudimento evoluto. Perianthium ♀ 2–5-lobum v. partitum, ab achænio liberum.*

Excepta: Perianthium ♀ in *Hesperocnide* et rarissime in *Urera* more *Bœhmeriearum* tubulosum, ore contracto minute dentato.

* *Achænium rectum. Stipulæ laterales, liberæ.*

68. Urtica. Herbæ foliis oppositis. Perianthium ♀ 4-partitum, segmentis exterioribus minoribus. Stigma penicillato-capitatum.—*Orbis utriusque reg. temp. et subtrop.*

69. Hesperocnide. Herbæ annuæ, foliis oppositis. Perianthium ♀ subclausum, ovarium et achænium arcte includens. Stigma penicillato-capitatum.—*Amer. bor., ins. Sandw.*

70. Nanocnide. Herbæ annuæ, foliis alternis. Perianthium ♀ 4-partitum, segmentis exterioribus latioribus carinatis. Stigma penicillato-capitatum.—*Japonia et ins. Asiæ or.*

** *Achænium obliquum. Stipulæ (excepta* Obetia*) intra petiolum plus minus connatæ. Folia alterna.*

71. Obetia. Arbores fruticesve. Perianthii ♀ segmenta 4, membranacea, interioribus majoribus circa fructum auctis. Stigma oblongum. Cymæ ♂ laxæ, ♀ capitatæ sessiles.—*Madagasc.*

72. Fleurya. Herbæ annuæ. Perianthii ♀ segmenta 4 æqualia v. inæqualia, achænio

breviter exserto sæpius reflexo. Stigma ovatum v. lineare. Florum glomeruli racemoso-spicati v. paniculati.—*Utriusque orbis reg. trop., Afr. austr.*

73. Sceptrocnide. Herba elata. *Stamina segmentis perianthii ♂ alte adnata.* Perianthii ♀ segmenta 2 ovata plana, 2 minuta. Stigma lineare. Florum glomeruli longe racemosi v. subpaniculati.—*Japonia.*

74. Laportea. Frutices arbores v. herbæ perennes. Perianthii ♀ lobi 4 æquales v. inæquales, fructiferi immutati sub achænio sæpe reflexi persistentesque. Stigma filiforme. Florum glomeruli paniculati, rarius racemosi.—*Amer. bor., Mexico, Afr. et Asia trop., ins. Pacif., Australia.*

75. Urera. Frutices rarius suffrutices. Perianthium ♀ 4-lobum, fructiferum carnosulum, achænium includens v. eo brevius. Stigma penicillato-capitatum. Florum glomeruli paniculati.—*Amer. et Afr. trop., ins. Mascar. et Pacif.*

76. Gyrotænia. Frutices v. arbores. Perianthium ♀ 4-lobum, parvum, fructiferum immutatum, sub achænio persistens. Stigma penicillato-capitatum. Flores dense glomerato-spicati, rhachi fructifera carnosa.—*Ind. occid.*

77. Girardinia. Herbæ elatæ. Perianthium ♀ ovoideo-tubulosum, 2–3-dentatum, demum spathaceo-fissum. Stigma subulatum. Florum glomeruli spicati v. subpaniculati, spica ♀ pilis stimulisve longis crebrisque horridæ.—*Asia et Afr. trop.*

Subtribus 2. Procrideæ. *Herbæ rarissime basi frutescentes pilis innocuis. Flores glomerati cymosi capitati v. in receptaculo discoideo conferti, ♂ 4–5-meri, rarius 2–3-meri, ovarii rudimento evoluto. Perianthium ♀ 3–5-partitum, ab achænio liberum. Staminodia sæpe adsunt.*

* *Folia opposita, æquilatera v. vix inæquilatera.*

78. Pilea. Perianthium ♀ 3-partitum, segmento uno majore, fructiferum vix v. parum auctum, achænio incluso v. exserto. Stigma breviter penicillatum. Cymæ capituliformes v. laxæ ramosæ.—*Utriusque orbis reg. trop. exclusa Australia.*

79. Achudemia. Perianthium ♀ æqualiter 5-partitum, fructiferum laxum, achænium includens. Stigma sessile, villosiusculum. Herbæ teneræ. Cymæ laxæ, longe pedunculatæ.—*Java, Japonia.*

80. Lecanthus. Perianthium ♀ inæqualiter 3-partitum, fructiferum laxum, achænio brevius. Stigma penicillatum. Flores in receptaculo discoideo conferti.—*Ind. or.*

** *Folia perfecta specie alterna, disticha, obliqua, latere superiore minore, addito sæpius altero nano subopposito, rarius æquilatera.*

81. Pellionia. Perianthium ♀ 4–5-partitum, fructiferum achænium vestiens. Stigma sessile, penicillatum. Cymæ sessiles v. pedunculatæ, densissimæ v. laxiores, rhachi non dilatata.—*Asia trop., ins. Pacif.*

82. Elatostema. Perianthium ♀ parvum v. 0, fructiferum non auctum. Stigma sessile, penicillatum, evanidum. Flores receptaculo demum explanato discoideo v. lobato insidentes.—*Afr. et Asia trop., Japonia.*

83. Procris. Perianthium ♀ parvum v. 3–4-partitum, fructiferum carnosum achænium vestiens v. sub achænio minimum. Flores ♂ glomerati, ♀ capitati, receptaculo subgloboso carnoso insidentes.—*Afr. et Asia trop., ins. Mascar. et Pacif.*

Subtribus 3. Bœhmerieæ. *Frutices arbores v. rarius herbæ, pilis innocuis. Flores glomerati capitati v. sparsi, exinvolucrati, ♂ 4–5-meri, rarius 2–3-meri, ovario rudimento evoluto. Perianthium ♀ tubulosum, ore contracto, achænium includens v. brevius et appressum v. 0.*

* *Perianthium fructiferum membranaceum v. siccum, achænium liberum includens.*

84. Bœhmeria. Caules basi v. undique frutescentes, foliis oppositis v. alternis. Florum glomeruli sessiles, ad axillas conferti v. secus rhachin sparsi v. in ramis paniculæ plus minus dissiti. Stigma filiforme, persistens.—*Utriusque orbis reg. trop., Chile, Amer. bor., Japonia.*

85. Chamabaina. Herba diffusa, foliis oppositis. Florum glomeruli axillares. Stigma ovatum, persistens.—*Ind. or.*

86. Pouzolsia. Herbæ v. basi plus minus frutescentes, foliis alternis v. rarissime oppositis. Florum glomeruli axillares v. in spicam simplicem terminalem basi vix foliatam dispositi. Flores ♂ 4–5-meri, rarius 3-meri. Stigma filiforme, deciduum.—*Afr. et Asia trop., in Amer. trop. paucæ.*

87. DISTEMON. Herba foliis alternis. Florum glomeruli in spicam simplicem terminalem dispositi. Flores ♂ 2-meri, rarius 3-meri. Stigma lineare, deciduum.—*Ind. or.*

** *Perianthium fructiferum plus minus carnosum, achænium liberum v. vix adnatum includens.*

88. CYPHOLOPHUS. Arbores fruticesve, foliis oppositis. Florum glomeruli densissime globosi, ad axillas v. nodos defoliatos arcte sessiles. Perianthium fructiferum ore contracto dentatum. Stigma lineare, recurvum, persistens.—*Archip. Malay., ins. Pacif.*

89. TOUCHARDIA. Frutices foliis maximis alternis. Florum glomeruli dense globosi in pedunculo ramoso pauci. Perianthii ♀ lobi 4, 2-seriatim imbricati. Stigma brevissime oblongum.—*Ins. Sandw. aliæque maris Pacifici.*

90. SARCOCHLAMYS. Frutex foliis alternis angustis rugosis subtus niveis. Florum glomeruli interrupte v. dense spicati. Perianthium fructiferum oblique accretum, hinc gibbum, ore contracto dentatum. Stigma parvum, penicillatum.—*Ind. or., Archip. Malay.*

91? POIKILOSPERMUM. Frutex foliis alternis magnis integerrimis. Inflorescentia dichotome cymosa. Perianthium ♀ obconicum ore minuto, fructiferum carnosum, achænium exserens. Stigma capitellatum.—*Amboina.*

92. NERAUDIA. Frutices foliis alternis. Florum glomeruli dense globosi, ad axillas arcte sessiles. Perianthium fructiferum ore contracto dentatum, achænio incluso basi carnoso-annulato. Stigma lineare, deciduum.—*Ins. Sandw.*

93. PIPTURUS. Frutices v. arbores foliis alternis. Florum glomeruli ad axillas conferti v. secus rhachin spicæ v. ramos paniculæ sessiles. Perianthium fructiferum carnosum, ore minuto, achænio incluso subadnato. Stigma lineare, deciduum.—*Ins. Mascar., Archip. Malay., ins. Pacif.*

*** *Perianthium ♀ ovario arcte adnatum.*

94. VILLEBRUNEA. Frutices v. arbores foliis alternis. Florum glomeruli capituliformes, ad axillas sessiles v. plures laxe cymosi. Perianthium fructiferum tenuiter subcarnosum. Stigma sessile, ciliato-penicillatum.—*Ind. or., Archip. Malay., Japonia.*

95. DEBREGEASIA. Frutices foliis alternis. Florum glomeruli ad axillas sessiles v. plures cymosi. Perianthium fructiferum succulentum. Stigma penicillatum.—*Ind. or., Archip. Malay., Japonia.*

**** *Perianthium ♀ minutum v. 0.*

96. LEUCOSYKE. Frutices v. arbusculæ foliis alternis. Florum glomeruli globosi, ad axillas solitarii v. brevissime racemosi nec cymosi. Perianthium ♀ sub fructu parvum. Stigma penicillatum.—*Archip. Malay., ins. Pacif.*

97. MAOUTIA. Frutices foliis alternis. Florum glomeruli parvi, paniculati. Perianthium ♀ minutum v. 0. Stigma penicillatum.—*Ind. or., Archip. Malay., ins. Pacif.*

98. MYRIOCARPA. Frutices foliis alternis. Flores secus rhachin longam filiformem numerosissimi. Perianthium ♀ (præter bracteolas 2 in stipite) 0. Stigma oblique oblongum.—*Amer. trop.*

99. PHENAX. Suffrutices v. frutices tenues. Florum glomeruli ad axillas sessiles, bracteis ferrugineis prominulis. Perianthium ♀ 0. Stigma elongatum.—*Amer. trop, Mauritius, Malacca (inquilina?).*

Subtribus 4. Parietarieæ. *Herbæ suffrutices v. rarius frutices, pilis innocuis. Folia integerrima. Involucra e bracteis 2-6 connatis v. liberis, flores 1-3 v. rarius ∞ includentia.*

100. PARIETARIA. Herbæ sæpius diffusæ. Cymulæ axillares, 3-8-floræ, androgynæ, floribus fertilibus interdum hermaphroditis a bracteis involucrantibus liberis. Stigma penicillatum, breve v. lineare.—*Utriusque orbis reg. temp., intra trop. paucæ.*

101. GESNOUINIA. Arbuscula. Involucra secus ramos paniculæ glomerulata, 3-flora, flore centrali ♀ achænioque tubo involucri inclusis.—*Ins. Canar.*

102. HELXINE. Herba diffusa. Involucra 1-flora, ad axillas solitaria.—*Corsica, Sardinia.*

103. ROUSSELIA. Herba diffusa. Flores ♂ brevissime laxeque racemosi, exinvolucrati, ♀ in eadem axilla gemini, bracteis 2 involucrati.—*Ind. occid.*

104. HEMISTYLIS. Frutices. Flores ♂ glomerato-spicati, exinvolucrati, ♀ gemini, bracteis 2 involucrati, involucris ad basin spicarum ♂ paucis v. in panicula distincta numerosis.—*Amer. trop. austral.*

Subtribus 5. **Forskohleeæ.** *Herbæ pilis innocuis, floribus ad axillas confertis involucratis v. nudis. Perianthium ♂ irregulare, hinc fissum stamine unico absque rudimento ovarii, ♀ tubulosum, achænium includens v. 0.*

105. Forskohlea. Involucra in axillis plura, androgyna, 3–6-partita, intus dense lanata.—*Hispania, Africa, Asia occid.*

106. Droguetia. Involucra in axillis solitaria v. plura v. in spicam terminalem disposita, androgyna, campanulata, breviter dentata.—*Afr. trop. et austr., Madagasc., Ind. or.*

107. Australina. Flores ad axillas glomerati, exinvolucrati.—*Afr. austr., Australia.*

Tribus VIII. Thelygoneæ. Herba annua. Flores unisexuales, ad axillas fasciculati. Perianthium 2-partitum. Stamina ∞. Stylus indivisus ovulum erectum, incurvum. Nux subglobosa. Semen hippocrepiforme.

108. Thelygonum. Genus unicum.—*Reg. Mediterr.*

GENERA EXCLUSA V. DUBIA.

Aporosa, Bl., olim *Artocarpeis* ascripta, est **Euphorbiacea,** supra, p. 282.

Bruea, Gaudich. in Freyc. Voy. Bot. 511, frutex Bengalensis, pro genere proprio *Pouroumearum* propositus, est verisimiliter stirps sub alio nomine bene nota sed ex charactere manco nequaquam recognoscenda. A botanicis Parisiensibus qui de hoc ordine tractarent sub silentio præteritur.

Gynocephalium, Bl., est *Phytocrene*, Wall., supra i. 354 inter **Olacineas** enumerata.

Gunnera, Linn., ab Endlichero *Urticaceis* approximata, est **Halorageа,** supra, i. 676.

Haynea, Schum. et Thonn, Beskr. Guin. Pl. 406, ex Africa tropica, ab Endlichero *Pileæ* adscripta, a Weddellio rejicitur, nam folia alterna dicuntur, longe petiolata, grosse crenata, flores ♂ 5-meri, perianthia ♀ 4-fida, characteres a *Pilea* alieni. Cæterum characteres omnes *Urticearum*, exceptis stylis 3 raro 1 (an rite observatis?). Genus adhuc valde dubium remanet.

Vanieria, Lour. Fl. Coch. 564, quoad speciem Cochinchinensem, est forte *Cudrania* v. *Plecospermum*, sed character ad rite determinandum haud sufficit, et specimina non vidimus.

Tribus I. Ulmeæ.

1. **Ulmus,** *Linn. Gen. n.* 316.—Flores polygami, plerique hermaphroditi, plures tamen ♂ cum v. absque rudimento ovarii, in ramo annotino fasciculati. Perianthium laxe campanulatum, 4–8- (sæpius 5-) fidum, lobis imbricatis. Stamina 4–8, sæpius 5, filamentis erectis demum exsertis; antheræ glabræ. Ovarium sessile v. sæpius stipitatum, compressum; stylus brevis, alte 2-fidus v. fere 2-partitus, ramis a basi introrsum stigmatosis; ovulum sub apice affixum, pendulum, breviter amphitropum. Fructus compressus, siccus, oblique ovatus, undique cinctus ala lata membranacea radiatim reticulato-venosa a basi stipitis usque ad apicem ramorum styli extensa; pericarpium chartaceum v. tenuiter crustaceum. Semen sub apice affixum, pendulum, plano-compressum; albumen 0; embryo rectus, cotyledonibus planis æqualibus, radicula parva supera.—Arbores inermes. Folia alterna, disticha, serrata, pennivenia, hyeme decidua v. subperennantia; stipulæ laterales, scariosæ, caducissimæ. Florum fasciculi ad nodos defoliatos v. in axillis foliorum persistentium ramorum annotinorum solitarii, sessiles, novelli squamis imbricatis obtecti, cæterum aphylli. Flores in fasciculo numerosi, nunc fere omnes ☿, nunc plerique ♂.

Species ad 16, per regiones temperatas hemisphærii borealis late dispersæ, in Asia usque ad montes intratropicales extensæ. *Planch. in DC. Prod.* xvii. 154, ubi genus post Spachium in sectiones sequentes dividitur:—

1. *Oreoptelea.* Perianthium vix ad medium lobatum. Fructus ala margine ciliata. Folia decidua. Pedicelli floribus longiores. *Reichb. Ic. Fl. Germ. t.* 666. *Mich. N. Am. Sylv. t.* 126, 127. *Torr. Fl. N. York, t.* 96. Chætoptelea, *Liebm. in Vidensk. Meddel. Nat. Foren. Kiobenh.* 1850, 64, *et in K. Dansk. Vidensk. Selsk. Skrift. ser.* 5, ii. 336.

2. *Dryoptelea.* Perianthium vix ad medium lobatum. Fructus glabri. Folia decidua. Pedicelli breves. *Reichb. Ic. Fl. Germ. t.* 660 *ad* 665. *Nees, Gen. Fl. Germ. Monochl. n.* 34. *Pall. Fl. Ross. t.* 48. *Brand. For. Fl. t.* 51. *Mich. N. Am. Sylv. t.* 128, 129.

3. *Microptelea.* Perianthium ultra medium partitum. Fructus glabri. Folia in ramis annotinis subpersistentia. Pedicelli varii. *Jacq. Hort. Schænbr. t.* 262. *Wall. Pl. As. Rar t.* 200. *Nutt. Sylv. Amer. t.* 11. MICROPTELEA, *Spach in Ann. Sc. Nat. ser.* 2, xv. 358.

2. **Holoptelea,** *Planch. in Ann. Sc. Nat. ser.* 3, x. 259, *et in DC. Prod.* xvii. 163.—Flores polygami, plerique hermaphroditi, plures tamen ♂ cum v. absque rudimento ovarii, in ramis annotinis fasciculati. Perianthium 4–8-partitum, segmentis angustis imbricatis sæpe inæqualibus. Stamina tot quot segmenta v. aliquanto plura (segmento uno alterove minuto v. deficiente potius quam staminibus seriei interioris evolutis?), filamentis erectis; antheræ latæ (an semper?) puberulæ. Ovarium stipitatum, compressum; stylus brevis, 2-fidus, ramis a basi stigmatosis; ovulum sub apice affixum, pendulum, anatropum. Fructus compressus, siccus, oblique ovatus, undique cinctus ala lata membranacea radiatim reticulato-venosa a basi stipitis usque ad apices ramorum styli extensa; pericarpium tenue chartaceum. Semen sub apice affixum, plano-compressum, testa membranacea; albumen 0; embryo fere rectus, cotyledonibus latissimis æqualibus tenuibus longitudinaliter complicatis, radicula supera inter cotyledones breviter retracta. – Arbor. Folia alterna, disticha, integerrima v. (ex specimine Edgeworthii) plantæ junioris serrata, penninervia, annua; stipulæ laterales, parvæ, scariosæ, caducissimæ. Florum fasciculi ad nodos defoliatos ramorum annotinorum solitarii, sessiles, esquamati v. squama una alterave parva caducissima stipati.

Species 1, Indiæ orientalis incola. *Roxb. Corom. Pl. t.* 78 (*Ulmus*). *Wight, Ic. t.* 1968 (*lapsu calami* Holopetala), *et f.* 2, 3 *et* 6, *quoad perianthii segmenta male*).

3. **Phyllostylon,** *Capanema in litt.*—Flores polygami, fertiles hermaphroditi, masculi tamen numerosi cum v. absque rudimento ovarii, in ramis annotinis fasciculati. Perianthium 5-8-partitum, segmentis angustis tenuibus inæqualibus leviter imbricatis. Stamina numero segmentorum sæpius pauciora, inæqualia, filamentis brevibus erectis; antheræ glabræ. Ovarium sessile, plano-compressum; stylus cum ovario continuus, planus, late falcatus v. sæpius inæqualiter divaricato-bilobus, margine superiore stigmatosus; ovulum ex apice pendulum. Fructus . . .—Arbor inermis. Folia alterna, breviter petiolata, serrata, penninervia, decidua, fere *Planeræ*, novella pubescentia; stipulæ parvæ, laterales, distinctæ, cordato-lanceolatæ. Florum fasciculi in ramis annotinis defoliatis sessiles, squamis paucis imbricatis stipati, aphylli. Flores in fasciculo inferiores masculi absque rudimento, superiores secus rhachin ramosque fasciculi subgemini ovario rudimento plus minus evoluto, summi ovario perfecto præditi. Rami foliiferi ut videtur tardius evoluti. Fructus juniores in speciminibus vix ex ovario aucti, perfecti nobis desunt.

Species 1, *P. brasiliensis*, Capan., in Brasiliæ maritimis prope Rio Janeiro crescens, ubi *Pao Branco* dicitur (*Capanema*).

4. **Planera,** *Gmel. Syst. Nat.* ii. 150.—Flores polygami, plerique hermaphroditi, inferiores pauci masculi cum v. absque rudimento ovarii, in ramo annotino fasciculati. Perianthium campanulatum, ad medium 4–5-fidum, lobis imbricatis. Stamina 4–5, filamentis tenuibus rectis exsertis; antheræ glabræ. Ovarium stipitatum; stylus excentricus, brevis, alte 2-fidus, ramis linearibus introrsum a basi stigmatosis; ovulum sub apice affixum, pendulum, breviter amphitropum. Fructus oblique ovatus, compressus, dorso carinatus, cæterum undique carnoso-muricatus; pericarpium crassiusculum, fere carnosum. Semen plano-compressum, testa membranacea; albumen 0; embryo rectus, cotyledonibus latis tenuibus planis æqualibus integris, radicula brevi supera.—Arbor inermis. Folia alterna, disticha, breviter petiolata, serrata, penninervia; stipulæ laterales, liberæ, caducæ. Florum fasciculi ad nodos defoliatos ramorum annotinorum more *Ulmi* solitarii, sessiles, primum aphylli, squamis paucis imbricatis basi obtecti, post anthesin in ramos foliatos producti, fructibus parvis ad axillas foliorum inferiorum solitariis geminisve breviter pedicellatis. Flores ♂ a speciminibus nostris jam delapsi, ex auctoribus pauci sunt, ad basin fasciculi v. ramuli floriferi.

Species 1, Americæ borealis civitatum australiorum incola, ibidem ex Michaux rara. *Planch. in DC. Prod.* xvii. 167. *Mich. N. Amer. Sylv.* iii. *t.* 130.

Genus quoad fructum et embryonem omnino *Ulmearum* etsi inflorescentia inter illas et *Celtideas* subintermedium.

Tribus II. Celtideæ.

5. **Zelkova,** *Spach in Ann. Sc. Nat. ser.* 2, xv. 356. (Abelicea, *Baill. Hist. Pl.* vi. 185.) —Flores monoici, v. fertilibus rarius staminigeris polygami, in ramis hornotinis subsessiles. Fl. ♂: Perianthium late campanulatum, margine sinuatum v. breviter lateque 4–5-lobum. Stamina 4–5, filamentis erectis brevibus ; antheræ majusculæ, demum exsertæ. Ovarii rudimentum 0 v. rarius evolutum. Flores fertiles ♀ v. rarius ☿: Perianthium quam in masculis altius lobatum, lobis imbricatis. Staminodia 0 v. plus minus evoluta, rarius stamina perfecta. Ovarium sessile ; stylus ad basin 2-partitus, ramis brevibus a basi introrsum stigmatosis (v. rarius ima basi nudis ?) ; ovulum fere ab apice pendulum, breviter campylotropum. Fructus subdrupaceus, irregulariter oblique subglobosus v. carinatus, stylo excentrico breviter subrostratus, dorso carinatus, cæterum lævis v. nervosus ; exocarpium membranaceum v. tenuiter carnosum ; endocarpium plus minus induratum sæpe latius quam longum et apice medio impressum. Semen latum, compresso-concavum, ab apice pendulum v. fere horizontale, testa crassiuscule membranacea rugosa ; albumen 0; embryo curvulus, semini subconformis, cotyledonibus sibimet applicitis latis subæqualibus tenuibus v. crassiusculis, apice (an semper ?) emarginatis v. late 2-lobis, radicula brevi supera v. ascendente.—Arbores. Folia alterna, sessilia v. brevissime petiolata, serrata v. crenata, pennivenia, annua ; stipulæ liberæ, tenues, angustæ, caducæ. Flores præcoces in ramis hornotinis sessiles v. brevissime pedicellati, ♂ infra folia v. ad axillas foliorum infimorum per 2–5 glomerati, ♀ (v. ☿ ?) superiores ad axillas solitarii, axillis foliorum summorum sterilibus. Fructus parvi.

Species genuinæ fructu ventricoso irregulariter subgloboso 3: una Cretica, altera Caucasico-Caspica, tertia Japonica. *Planch. in DC. Prod.* xvii. 165. *Pall. Fl. Ross. t.* 60 (*Rhamnus*). *Wats. Dendrol. Brit.* ii. *t.* 106 (*Planera*). His tamen haud inepte addidit Baill. Hist. Pl. l. c. Hemiptelæam, *Planch. in Compt. Rend. Acad. Par.* 1872, *ex eod. in DC. Prod.* xvii. 164, e China. Habitus idem nisi ramulis hinc inde abbreviatis valide spinescentibus. Inflorescentia tanquam nota et flores (a nobis non visi) ex descr. differentiam nullam præbent. Fructus ex speciminibus nostris valde compressus, exocarpio vix carnosulo carinam versus valde attenuato plano, nervo carinali tamen marginato nec alato ; endocarpium ut in *Zelkovis* genuinis induratum et curvulum. Semen perfectum ignotum, sed ex loculi forma ei *Zelkovæ* simile.

Abelicea, Belli, a Baillono citata, est nomen specificum nec genus ad normam Linneanam stabilitum. *Abelicea*, Endl., est sectio *Planeræ* minime admittenda, *Microptelæam* cum *Zelkova* includens. Nomen Spachianum pro genere nostro ab illo bene definitum jure prioritatis gaudet. Genus cæterum fructu aliisque notis potius ad *Celtideas* quam ad *Ulmeas* pertinet, *Planera* autem *Ulmo* ipsi affinior est.

6. **Ampelocera,** *Klotzsch in Linnæa*, xx. 541.—Flores polygami, hermaphroditi aut ovarii abortu masculi, axillares. Perianthium cyathiforme, alte 5-fidum, laciniis ovatis concavis margine dentatis imbricatis. Stamina 10, perianthii laciniis opposita, filamentis filiformibus exsertis. Ovarium ovatum ; stylus 2-partitus, ramis stigmatosis subulatis indivisis divaricatis ; ovulum sub apice affixum, pendulum, micropyle supera. Drupa baccata. Semen arcuatum.—Arbor inermis, ramis squarrosis. Folia alterna, membranacea, remote serrata, pennivenia ; stipulæ laterales, liberæ. Flores articulati, racemosi, racemis axillaribus, plerumque gemmis corymbosis tegmentis aridis circumdantibus. (*Char. ex Klotzsch.*)

Species typica Peruviana, a nobis non visa, generis adhuc quodammodo dubii, a Planchonio ex ordine excluditur. Nota plura cum *Celtide* conveniunt, sed stamina ∞ et folia pennivenia discrepant. Huic addidit Grisebach, Cat. Pl. Cub. 57, speciem Cubensem foliis integerrimis, racemis brevibus paucifloris fere ad glomerulum reductis. Perianthium alte divisum in lacinias 4 suborbiculatas membranaceas leviter imbricatas. Stamina usque ad 16 serie subsimplici conferta. Styli rami a

basi continue stigmatosi; ovulum ab apice pendulum. Drupa globosa, exocarpio haud crasso carnoso v. succulento, endocarpio crustaceo duriusculo. Semen globosum, pendulum, testa membranacea; albumen 0; cotyledones carnosæ valde undulato-contortuplicatæ, radicula ascendente (in semine examinato) nec infera ut a Grisebachio dicitur.

7. **Celtis,** *Linn. Gen. n.* 1143.—**Flores polygami, fertiles hermaphroditi v. rarius feminei, masculi cum v. absque rudimento ovarii, in ramis hornotinis cymosi fasciculati v. fertiles solitarii. Perianthium alte v. fere ad basin 5- rarius 4-partitum, segmentis imbricatis. Stamina 5, rarius 4, filamentis erectis v. vix incurvis demum exsertis; antheræ ovatæ. Torus sæpius dense pilosus, vix tamen in discum expansus. Ovarium sessile; stylus centralis, 2-partitus, ramis plumoso-stigmatosis divergentibus indivisis 2-fidisve; ovulum ab apice pendulum, anatropum. Drupa succulenta, ovoidea v. globosa, interdum 2-carinata, æqualis, endocarpio osseo sæpius rugoso. Semen subconforme, testa membranacea; albumen 0 v. perparcum; embryo curvus, cotyledonibus latissimis sibimet applicitis concavo-subcucullatis v. transverse subplanis et incurvo-replicatis, interdum corrugatis, radicula sursum incurva incumbente v. cotyledonibus amplexa. —Arbores fruticesve inermes v. spinosi. Folia alterna, annua v. perennantia, serrata v. integerrima, pennivenia et 3- (rarius 4–5-) nervia, basi sæpe obliqua; stipulæ laterales, liberæ. Cymulæ masculæ v. androgynæ laxæ v. fasciculiformes, axillares v. ad basin innovationum; flores fertiles in axillis superioribus solitarii v. pauci, longius pedicellati.**

Species enumeratæ ultra 70 bene tamen distinctæ vix 50, per regiones temperatas tropicasque utriusque orbis late dispersæ pleræque in hemisphærio boreali. *Planch. in DC. Prod.* xvii. 169, ubi in sectiones 4 sequentes distribuuntur:—

1. *Euceltis.* Arbores inermes. Folia decidua, serrata v. rarius integerrima. Cymæ masculæ v. androgynæ fasciculiformes. Flores fertiles plerique in axillis superioribus solitarii longe pedicellati. Styli rami stigmatosi lineares, indivisi. Species extratropicæ hemisphærii borealis, v. paucæ montanæ tropicæ.—*Reichb. Ic. Fl. Germ. t.* 667. *Wats. Dendrol. Brit. t.* 105, 147. *Jaub. et Spach, Ill. Pl. Or. t.* 400. *Wight, Ic. t.* 1970. *Dcne. in Jaquem. Voy. Bot. t.* 152. *Brand. For. Fl. t.* 50. *Bedd. Fl. Sylv. t.* 312. *Mich. N. Amer. Sylv. t.* 114. *Nutt. N. Amer. Sylv. t.* 39, 40.

2. *Sponioceltis*, species 2 continet, alteram Indiæ occidentalis alteram Indiæ orientalis, in omnibus *Euceltis* convenientes, nisi cymis masculis laxioribus, fertilibus plurifloris.

3. *Solenostigma.* Arbores v. frutices inermes. Folia sæpius perennantia, coriacea, integerrima. Cymæ masculæ v. androgynæ laxe multifloræ, floribus fertilibus tamen interdum solitariis. Styli rami stigmatosi sæpissime (vix semper) apice dilatati bifidi v. etiam bis bifidi. Species gerontogeæ pleræque tropicæ. *Wight, Ic. t.* 1969. SOLENOSTIGMA, *Endl. Prod. Fl. Norf.* 41. *Blume, Mus. Bot. Lugd. Bat.* ii. 66, *t.* 33.

4. *Momisia.* Arbores fruticesve spinis axillaribus sæpissime armati. Folia integerrima v. serrata. Cymæ sæpe multifloræ, breviores tamen densioresque quam in *Solenostigmate*. Styli rami stigmatosi lineares, 2-fidi. Species omnes Americanæ tropicæ v. subtropicæ. *Torr. Bot. Emory Exped. t.* 50. *Miq. in Mart. Fl. Bras.* iv. i. *t.* 62, 63. MERTENSIA, *H. B. et K. Nov. Gen. et Sp.* ii. 30, *t.* 103. MOMISIA, *Dumort. Anal. Fam.* 17.

Species Africana inermis in Prodromo ad *Momisiam* relata, quæ sectio *Momisiopsis*, Blume, Mus. Bot. Lugd. Bat. ii. 69, t. 36, nobis melius ad *Solenostigma* referenda videtur.

8. **Pteroceltis,** *Maxim. in Bull. Acad. Sc. Petersb.* xviii. 292; *Mel. Biol.* ix. 26, *cum ic.* —**Flores monoici (polygami?), masculi in ramis hornotinis fasciculati, fertiles ignoti, fructus in axillis solitarii. Fl. ♂: Perianthium 5-partitum, segmentis valde imbricatis. Stamina 5, filamentis erectis. Ovarii rudimentum 0. Fructus supra perianthii cicatricem stipitatus, subglobosus, ala cinctus lata transverse reticulato-venosa a basi stipitis usque ad stylum extensa; exocarpium tenue, endocarpium osseum. Semen pendulum, testa tenuiter membranacea; albumen parcissimum; embryo curvus, cotyledonibus latis sibimet applicitis bis complicatis et transverse undulato-subcorrugatis, radicula incumbente incurvo-ascendente.—Arbor v. frutex inermis. Folia alterna, petiolata, serrata, 3-nervia; stipulæ deciduæ. Florum ♂ fasciculi in axillis inferioribus sessiles, squamis paucis stipati. Fructus in axillis superioribus solitarii, longe pedunculati.** (*Char. ex ic. et descr. Maxim.*)

Species 1, Mongoliæ v. Chinæ borealis incola, a nobis non visa. Genus in omnibus *Celti* convenire videtur, excepto fructu more *Ulmi* stipitato et ala lata cincto.

9. **Trema,** *Lour. Fl. Cochinch.* 562. (Sponia, *Comm. ex Dcne. Herb. Tim. Descr.* 170.) —Flores monoici subdioici v. fertilibus sæpe staminigeris polygami, ad axillas cymosi. Fl. ♂: Perianthium 5- rarius 4-partitum, segmentis induplicato-valvatis v. vix leviter imbricatis. Stamina 5, rarius 4, filamentis brevibus erectis. Ovarii rudimentum 0 v. plus minus evolutum. Fl. fertiles: Perianthii segmenta subplana, leviter imbricata, v. ubi stamina adsint plus minus concava v. induplicata. Ovarium sessile; stylus centralis, alte v. usque ad basin divisus, ramis stigmatosis linearibus crassiusculis interdum basi ovario adnatis, stigmate tamen semper continuo; ovulum sub apice affixum, pendulum. Torus utriusque sexus sæpius pilosus. Drupa parva, æqualis, ovoidea v. subglobosa, styli ramis involutis sæpius coronata; exocarpium plus minus succulentum; endocarpium durum. Semen subconforme, testa membranacea; albumen carnosum, sæpius parcum; embryo curvus v. fere involutus, cotyledonibus angustis sibimet applicitis, radicula incumbente ascendente.—Arbores v. frutices elatiores, inermes. Folia alterna, sæpius disticha, breviter petiolata, serrata, pennivenia et basi trinervia; stipulæ laterales, liberæ, sæpius parvæ, caducæ. Cymæ ad axillas subsessiles, masculæ et fertiles in axillis v. stirpibus distinctis v. rarius androgynæ. Fructus parvi, perianthio persistente sæpius stipati.

Species enumeratæ fere 30, plurimæ tamen inter se vix distinguendæ et verisimiliter ad 20 reducendæ, per regiones tropicas et subtropicas utriusque orbis late dispersæ. *Planch. in DC. Prod.* xvii. 195 (*Sponia*). *Blume, Mus. Bot. Lugd. Bat.* ii. 58, *t.* 32. *Brongn. in Duperr. Voy. Bot. t.* 47, 48 (*Celtis*). *Wight, Ic. t.* 602, 603 (*Celtis*), *t.* 1971, 1990 (*Sponia*). *Bedd. Fl. Sylv. t.* 311 (*Sponia*). *Miq. Stirp. Surin. t.* 57 (*Sponia*).

10. **Parasponia,** *Blume, Mus. Bot. Lugd. Bat.* ii. 65, *t.* 35.—Flores polygami, fertiles hermaphroditi v. fœminei, masculi cum v. absque rudimento ovarii, ad axillas cymosi. Perianthium omnium 5-partitum, segmentis latis valde imbricatis. Stamina 5, filamentis brevibus erectis v. apice leviter inflexis; antheræ ovatæ. Ovarium sessile; stylus centralis, ad basin divisus, ramis stigmatosis linearibus crassiusculis; ovulum sub apice affixum, pendulum. Torus pilosus. Drupa parva, æqualis, ovoidea v. subglobosa, styli ramis involutis coronata; exocarpium succulentum; endocarpium durum. Semen subconforme, testa membranacea; albumen carnosum; embryo involutus, cotyledonibus angustis sibimet applicitis, radicula incurvo-ascendente.—Arbores inermes, habitu *Tremæ*. Folia alterna, disticha, breviter petiolata, serrata, pennivenia et basi trinervia; stipulæ in unam intrapetiolarem gemmam terminalem obtegentem et caducissimam connata v. arcte convoluta. Flores minimi, cymulis parvis omnibus axillaribus. Ovarii rudimentum in fl. ♂ interdum magnum clavatum vertice plano-concavum vidimus, interdum vero omnino deesse videtur.

Species 2, Archipelagi Malayani et insularum maris Pacifici incolæ. *Planch. in DC. Prod.* xvii. 194.

11. **Aphananthe,** *Planch. in Ann. Sc. Nat. ser.* 3, x. 265, *et in DC. Prod.* xvii. 207.—Flores monoici, masculi dense cymosi, fœminei solitarii. Fl. ♂: Perianthium 5- rarius 4-partitum, segmentis obtusis concavis v. induplicato-cucullatis plus minus imbricatis. Stamina 5, rarius 4, filamentis rectis vix apice inflexis; antheræ oblongæ. Ovarii rudimentum 0 v. inter pilos tori obscurum. Fl. ♀: Perianthii segmenta angustiora, imbricata. Ovarium sessile; stylus centralis, 2-partitus, ramis stigmatosis linearibus crassiusculis; ovulum sub apice affixum, pendulum. Drupa ovoidea v. subglobosa, æqualis, exocarpio succulento, endocarpio duro. Semen conforme, testa membranacea; albumen tenue v. 0; embryo involutus, cotyledonibus angustis sibimet applicitis, exteriore majore, radicula incurvo-ascendente.—Arbores fruticesve inermes. Folia alterna, petiolata, serrata, prominule pennivenia et basi 3-nervia; stipulæ laterales, liberæ. Cymæ ♂ in axillis infimis v. ad basin innovationum præcoces, floribundæ. Flores ♀ in axillis superioribus tardius evoluti, solitarii, pedunculati.

Species 2, altera typica in ins. Philippinis et Australia crescens, foliis coriaceis, ramorum sterilium sæpe spinoso-dentatis lobatisve, segmentis perianthii ♂ latis valde imbricatis. *Hook. Ic. Pl. t.* 1174. Altera, japonica, differt foliis membranaceis, segmentis perianthii ♂ angustioribus fere cucullatis minus imbricatis, sed a Planchonio rite ad *Aphananthem* reducta videtur. Homoioceltis, *Blume, Mus. Bot. Lugd. Bat.* ii. 64, *t.* 34. Species tertia Prodromi, *A. cuspidata*, Planch., folia stipulas floresque potius *Gironnieræ* quam *Aphananthis* præbet.

12. **Gironniera,** *Gaudich. Voy. Bonite, t.* 85. (Nematostigma, *Planch. in Ann. Sc. Nat. ser.* 3, x. 265, *lapsu calami* Nemostigma. Helminthospermum, *Thw. in Hook. Kew Journ.* vi. 301, *t.* 9.)—Flores dioici, ad axillas cymosi v. fœminei solitarii. Fl. ♂ : Perianthium 5-partitum, segmentis latis obtusis valde imbricatis. Stamina 5, filamentis brevibus erectis apice leviter incurvis; antheræ ovatæ, erectæ. Ovarii rudimentum pilosum. Fl. ♀ : Perianthii segmenta quam in mare angustiora, acuta. Ovarium sessile; stylus centralis, alte 2-fidus, ramis stigmatosis longe filiformibus papillis minimis; ovulum sub apice pendulum. Drupa ovoidea v. subglobosa, sæpissime compressiuscula et 2-carinata; exocarpium carnosum v. succulentum; endocarpium durum, haud crassum. Semen (perfectum non vidimus) endocarpio subconforme, testa membranacea; albumen 0 v. sat copiosum; embryo contortus.—Arbores v. frutices inermes, glabri v. appresse pilosi. Folia alterna, breviter v. brevissime petiolata, integerrima v. leviter serrata, a basi pennivenia, sæpe ampla; stipulæ intrapetiolares convolutæ basi sæpius connatæ, gemmam terminalem includentes, caducissimæ. Cymæ axillares, nunc densæ sessilesque, nunc laxiores, floribus secus ramos dissitis v. masculis glomeratis; inflorescentia fœminea varia.

Species 7 v. 8, Zeylaniæ, Archipelagi Malayani, Chinæ australis et ins. maris Pacifici incolæ. *Planch. in DC. Prod.* xvii. 205. *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 25. *Bedd. Fl. Sylv. t.* 313.

Specimina nostra fructifera sat numerosa fructibus aspectu maturis prædita, sed semina perfecta frustra quæsivimus; nec a Planchonio nec a Blumeo nec a Baillono descripta, et icon et descriptio Thwaitesii cum icone Gaudichaudiano non conveniunt. Verisimiliter genus in sectiones 2 sequentes distinctas dividendum: 1. *Nematostigma*, floribus utriusque sexus cymosis, albumine (ex Gaudich.) sat copioso. Huc pertinent *G. nervosa* et *G. subæqualis*, Planch., et *G. celtidifolia*, Gaudich. 2. *Galumpita*, pedunculis fœmineis in axillis solitariis longiusculis 1–2-floris, albumine (ex Thwaitesio) 0. Huc pertinere videntur *G. rhamnifolia*, Blume, *G. parvifolia*, Planch., *G. reticulata*, Thw., quæ Galumpita, *Blume, Mus. Bot. Lugd. Bat.* ii. 73, a Planch. in DC. Prod. xvii. 209 ad *Aphananthem* relata, a Kurzio in For. Fl. Brit. Burm. ii. 470, ad *Gironnieram* rite revocata, *G. lucida*, Kurz, l. c., et verisimiliter *G. nitida*, Benth., cujus flores ♀ adhuc ignoti.

13. **Chætacme,** *Planch. in Ann. Sc. Nat. ser.* 3, x. 340, *et in DC. Prod.* xvii. 209.—Flores monoici, masculi cymosi, fœminei ad axillas solitarii. Fl. ♂ : Perianthium 5-partitum, segmentis induplicato-valvatis obtusis. Stamina 5, filamentis brevibus erectis; antheræ oblongæ. Ovarii rudimentum oblongum. Fl. ♀ : Perianthii segmenta quam in mare angustiora, leviter imbricata. Ovarium sessile; stylus centralis, 2-partitus, ramis stigmatosis tenuibus elongatis; ovulum ab apice pendulum. Drupa globosa, exocarpio crasso denso in sicco duro, endocarpio tenuiter osseo. Semen parvum, globosum, testa membranacea intra plicas embryonis intrusa; albumen cæterum 0; embryo curvus, cotyledone altera magna lata crasso-carnosa inflexa alteram parvam (in semine examinato imperfectam) includente, radicula brevi ascendente.—Frutex elatior, ramosissimus, glaber, spinis axillaribus v. lateralibus solitariis geminisve plus minus armatus. Folia alterna, breviter petiolata, integerrima, coriacea, tenuiter pennivenia; stipulæ in unam oppositifoliam gemmam terminalem includentem mox deciduam connatæ. Cymæ ♂ densæ, subsessiles, sæpius floribundæ. Fructus in axillis breviter pedunculati.

Species 1, in Africa australi imprimis orientali late dispersa, etiam intra tropicos a Welwitschio in Angola, a Schweinfurthio in terra Niam-niam lecta. *Harv. Thes. Cap. t.* 25.

Tribus III. Cannabineæ.

14. **Humulus,** *Linn. Gen. n.* 1116. (Lupulus, *Gærtn. Fruct.* i. 358, *t.* 75.)—Flores dioici, penduli, masculi paniculati, fœminei spicati. Fl. ♂ : Perianthium 5-partitum, seg-

mentis distinctis imbricatis. Stamina 5, filamentis brevissimis erectis; antheræ oblongæ, loculorum rima sæpe brevi. Ovarii rudimentum 0. Fl. ♀: Perianthium tenuissime membranaceum, ovario arcte applicitum eoque sæpius brevius, margine integrum. Ovarium sessile; stylus centralis, 2-partitus, ramis stigmatosis filiformibus caducissimis; ovulum ab apice pendulum. Achænium late ovatum, compressiusculum, perianthio persistente sæpe glanduloso indutum; pericarpium crustaceum. Semen pericarpio conforme, testa membranacea; albumen (integumenti superficies interior, *Gærtn.*) album, carnosum; embryo spiraliter involutus, cotyledonibus angustis sibimet applicitis, radicula brevi ascendente.—Herbæ volubiles alte scandentes, pilis reversis asperæ. Folia opposita, petiolata, lata, membranacea, serrata, 5–7-nervia, nunc cordata indivisaque, nunc sæpius palmatim 3–7-loba; stipulæ laterales, liberæ, diu persistentes. Paniculæ axillares, superiores sæpe paniculam terminalem foliatam formantes, masculæ laxe ramosæ, floribus breviter pedicellatis pendulis; paniculæ fœmineæ e spicis paucis pedunculatis pendulis strobiliformibus. Bracteæ in spica fructifera persistentes, auctæ, latæ, membranaceæ, coloratæ, laxe imbricatæ, achænia parva ad axillas sessilia occultantes.

Species 2, quarum una diu culta per regiones temperatas utriusque orbis latissime dispersa, altera Chinæ, Japoniæ insularumque adjacentium incola. *A. DC. Prod.* xvi. i. 29. *Reichb. Ic. Fl. Germ. t.* 656. *Nees, Gen. Fl. Germ. Monochl. n.* 31. *Hayne, Arzneigew.* viii. *t.* 36. *Berg. Off. Gew. t.* 27*b.* *Seem. Bot. Her. t.* 98.

Seminis albumen ab omnibus auctoribus negatur, nobis tamen a testa bene distinctum videtur, embryonem undique includens etsi intus læve nec intra plicas intrusum.

15. **Cannabis,** *Linn. Gen. n.* 1115.—Flores dioici, masculi breviter paniculati, fœminei ad axillas conferti intra bracteas sessiles. Fl. ♂: Perianthium 5-partitum, segmentis distinctis imbricatis. Stamina 5, filamentis brevissimis erectis; antheræ oblongæ. Ovarii rudimentum 0. Fl. ♀: Perianthium tenuissime membranaceum, ovario arcte applicitum eoque brevius, integrum, interdum vix distinguendum v. plane 0. Ovarium sessile; stylus centralis, 2-partitus, ramis stigmatosis filiformibus rectis caducissimis; ovulum ab apice pendulum. Achænium compressiusculum, perianthio tenuissimo vix separabili plus minus involutum; pericarpium crustaceum. Albumen carnosum, unilaterale, circa radiculam sat copiosum; embryo curvatus, cotyledonibus crasso-carnosis latis subæqualibus sibimet applicitis, radicula iis æquilonga recurvo-ascendente incumbente.—Herba erecta, elata. Folia alterna v. ima opposita petiolata, in segmenta 5–11 lanceolata serrata palmatim divisa, superiora rarius ad segmenta 1–3 reducta; stipulæ laterales, liberæ. Paniculæ ♂ foliis multo breviores, floribus fasciculatis breviter pedicellatis ut in *Humulo* pendulis. Flores ♀ ad axillas inter bracteas foliaceas conferti, singuli bractea ∞-nervi basi convoluta apice patente arcte inclusi. Perianthium verum haud facile observatum sæpe prætervisum.

Species 1, in Asia centrali ut videtur indigena, in variis regionibus temperatis tropicisve diu culta nunc sæpe inquilina. *A. DC. Prod.* xvi. i. 30. *Reichb. Ic. Fl. Germ. t.* 655. *Nees, Gen. Fl. Germ. Monochl. n.* 30 (*perianthio omisso*). *Schnitzl. Ic. t.* 95. *Hayne, Arzneigew.* viii. *t.* 35. *Berg. Off. Gew. t.* 19 B.

Albumen semper carnosum circa radiculam sat copiosum invenimus et in iconibus pluribus citatis bene depictum, etsi ab auctoribus ipsis uti ab omnibus fere botanicis negatur.

Tribus IV. Moreæ.

16. **Pseudostreblus,** *Bur. in DC. Prod.* xvii. 219.—Flores monoici, ♂ dense irregulariter cymosi, ♀ in pedunculo discreto v. in cymula ♂ solitarii. Fl. ♂: Perianthii segmenta 5, orbiculata valde imbricata. Stamina 5, filamentis in alabastro inflexis, per anthesin porrectis exsertis; antheræ magnæ. Ovarii rudimentum parvum, lineare. Fl. ♀: Perianthii segmenta 4, orbiculata, valde imbricata, ovarium arcte includentia, bracteis 4 parvis stipata. Ovarium subglobosum, rectum; stylus terminalis, alte 2-fidus, ramis stigmatosis longe linearibus subæqualibus; ovulum apice lateraliter affixum, pendulum.

Fructus immaturus perianthii segmentis valde auctis inclusus, maturus **indescriptus** nobisque deest.—Arbores proceræ, lactescentes, inermes, glabræ. Folia alterna, **brevissime** petiolata, majuscula, integerrima, penninervia; stipulæ parvæ, laterales, caducæ. **Flores** ♂ (in specie typica) in cymulas irregulares ad axillas sessiles v. breviter **pedunculatas** dense conferti at distincti. Flores ♀ sæpe in eodem ramo at in axillis diversis **solitarii**, breviter pedunculati, et interdum flos ♀ adest in media cymula mascula.

Species bene nota 1, in Khasiya Indiæ orientalis detecta, altera tamen congener videtur e **Penang** et Singapore, *Wall. Cat. Herb. Ind. n.* 7425, florum ♂ cymula densiore fere capituliformi, **rhachi** v. receptaculo subcarnoso. His verisimiliter valde affinis nisi stricte congener est CALIUS, **Blanco**, *Fl. Filip.* 698; *Bur. in DC. Prod.* xvii. 698, arbor lactescens in insulis Philippinis frequens, in **herbariis** nostris non agnota. Ex charactere dato a *Pseudotreblis* nostris non differt nisi foliis **serratis**, **florum** fasciculis longius pedunculatis androgynis, et perianthio utriusque sexus 4-mero.

17. **Bleekrodia,** *Blume, Mus. Bot. Lugd. Bat.* ii. 87, *t.* 28.—Flores monoici, in **cymas** axillares androgynas dispositi. Fl. ♂: Perianthium breviter 4–5-fidum, lobis **valvatis**. Stamina 4, filamentis in alabastro inflexis, per anthesin porrectis exsertis. **Ovarii** rudimentum lineare. Fl. ♀: Perianthium tubulosum, superne contractum, **breviter 4**-dentatum. Ovarium rectum v. parum obliquum, inclusum; stylus excentricus, **filiformis**, 2-fidus, ramis stigmatosis tenuibus æqualibus v. inæqualibus; ovulum ab apice **pendulum**. Fructus (a nobis non visus) perianthio tenuissimo inclusus, drupaceus; exocarpium **basi** crassum, superne tenuissimum, parte crassa 2-loba; endocarpium chartaceum. **Semen** subglobosum, testa tenuissima; albumen 0; embryo subglobosus, cotyledonibus **carnosis**, altera crassissima basi depressa, altera in depressione minima squamiformi; **radicula** minima, cotyledoni parvæ incumbens, incurvo-ascendens.—Arbusculæ **lactescentes**. Folia alterna, brevissime petiolata, acuminata, integerrima, penninervia; stipulæ **laterales**, deciduæ. Cymæ axillares, in specie Madagascariensi parvæ, densæ, bracteis **parvis** scariosis, flore ♀ unico, masculis pluribus; in specie Borneensi a nobis non **visa laxæ**. (*Char. fruct. ex Blume, et Bureau.*)

Species 2, altera Madagascariensis, altera Borneensis. *Bur. in DC. Prod.* xvii. 255.

18. **Fatoua,** *Gaudich. in Freyc. Voy. Bot.* 509; *Voy. Bonite, t.* 84.—Flores monoici, in cymas axillares androgynas subcapitatas dispositi. Fl. ♂: Perianthium alte 4-fidum, lobis valvatis. Stamina 4, filamentis in alabastro inflexis, per anthesin porrectis **exsertis**. Ovarii rudimentum parvum, conicum. Fl. ♀: Perianthium sub-6-partitum, **segmentis** angustis valvatis. Ovarium obliquum; stylus sublateralis, filiformis, longe **stigmatosus**, indivisus v. dente v. ramo brevi instructus; ovulum ex apice pendulum. **Achænium** perianthio persistente inclusum, oblique globosum, leviter compressum; **pericarpium** tenuiter crustaceum. Semen conforme, testa membranacea; albumen 0; embryo incurvus, cotyledonibus latis æqualibus, radicula longa incumbente incurvo-ascendente.—Herba diffusa v. ascendens, basi interdum indurescens, habitu *Urticarum*. **Folia** alterna, petiolata, dentata, penninervia et subtrinervia; stipulæ laterales, deciduæ. **Cymæ** subcapitatæ, parvæ, densæ, rhachi leviter dilatata ramosissima. Bracteæ parvæ, **exteriores** subinvolucrantes. Flores utriusque sexus in quaque cyma plures, ♀ in dichotomiis, ♂ ramulos terminantes.

Species 1, Archipelagi Malayani, Australiæ tropicæ, insularum maris Pacifici et Asiæ orientalis usque ad Japoniam incolæ. *Bur. in DC. Prod.* xvii. 256. *Blume, Mus. Bot. Lugd. Bat. t.* 38.

19. **Taxotrophis,** *Blume, Mus. Bot. Lugd. Bat.* ii. 77, *t.* 26.—Flores dioici, ♂ breviter racemoso-spicati, ♀ in pedunculo solitarii v. pauci. Fl. ♂: Perianthium 4-partitum, segmentis ovatis valvatis. Stamina 4, filamentis in alabastro inflexis, per anthesin porrectis exsertis. Ovarii rudimentum apice dilatatum, sinuatum. Fl. ♀: Perianthii segmenta 4, imbricata, persistentia; fructu breviora. Ovarium ovoideum, per anthesin rectum, mox uno latere valde auctum; stylus 2-partitus, primum subcentralis, post anthesin fere lateralis, ramis stigmatosis subulatis subæqualibus; ovulum sub stylo lateraliter affixum, pendulum. Fructus e perianthio exsertus, oblique subglobosus; pericarpium basi oblique carnoso-incrassatus, apice tenuis. Semen obliquum, testa rigidule membranacea; albumen 0; embryo subglobosus; cotyledones latæ, carnosæ, valde

contortuplicatæ (v. crassissimæ inæqualesque ?); radicula inflexa, ascendens.—Arbusculæ fruticesve glabri, spinis axillaribus paucis armati. Folia alterna, breviter petiolata, parce serrata v. crenata, pennivenia et reticulata; stipulæ parvæ, connatæ, gemmam obtegentes, caducissimæ. Inflorescentiæ axillares; spicæ ♂ breves, densiusculæ, floribus brevissime pedicellatis subfasciculatis, bracteis ad basin fasciculorum minimis. Pedunculus ♀ longiusculus, floribus 1–4 longe pedicellatis; bracteæ sub pedicellis parvæ v. minutæ et in pedunculo 1-floro bracteæ inferiores adsunt 1–2 vacuæ.

Species 3 v. 4. Zeylaniæ, Malaccæ et Archipelagi Malayani incolæ. *Bur. in DC. Prod.* xvii. 215, 216 (*Diplocos et Taxotrophis*). *Wight, Ic. t.* 1692 (fig. *infera sinistra*).

Genus a *Streblo* facile distinguitur inflorescentia mascula et stylo post anthesin fere laterali, in genera 2 in Prodromo dividitur: DIPLOCOS, *Bur.*, pedunculo fœmineo ∞-floro, semine usque ad medium albumine impleto et cotyledonibus contortuplicatis, et TAXOTROPHIS, pedunculo fœmineo 1-floro, semine exalbuminoso cotyledonibus crasso-carnosis, et sub *Diploco* specimina Zeylanica Thwaitesii et Birmanica Griffithii n. 4659, et icon Wightii, citantur. In specimine Thwaitesiano nostro fructus immaturi sunt quales a Wightio delineati, pericarpio basi crasse carnoso v. succulento, semine adhuc imperfecto. Specimina Griffithiana quoad folia et flores ♂ iis *T. javanicæ*, Blum., simillima sunt; in his semina bene matura albumen nullum ostendunt, et cotyledones plicatæ omnino ut delineavit Thwaites, qui de albumine silet. Specimina nostra plantæ javanicæ Blumei mascula sunt, et fructum non vidimus. In icone Blumeana embryo delineatur cotyledonibus crasso-carnosis omnino *Phyllochlamidis*, quæ ab auctore in genere suo *Taxotrophi* includitur, et forte hanc speciem nec *T. zeylanicam* refert.

20. **Phyllochlamys,** *Bur. in DC. Prod.* xvii. 217.—Flores dioici, ♂ capitato-spicati, ♀ in pedunculo solitarii. Fl. ♂: Perianthium 3–4-partitum, segmentis ovatis concavis imbricatis. Stamina 3–4, filamentis in alabastro inflexis, per anthesin porrectis exsertis. Ovarii rudimentum apice dilatatum. Fl. ♀: Perianthii segmenta 3–4, per anthesin ovario longiora, fructifera valde aucta, foliacea, acuminata. Ovarium ovoideum, per anthesin rectum, mox uno latere valde auctum; stylus 2-partitus, primum subcentralis, post anthesin fere lateralis, ramis stigmatosis subulatis subæqualibus; ovulum sub stylo lateraliter affixum, pendulum. Fructus perianthio foliaceo obtectus eique multo brevior, oblique subglobosus; pericarpium basi oblique carnoso-incrassatum, apice tenuius. Semen obliquum, testa membranacea; embryo membrana tenuissima (albumine ?) inclusus, globosus, cotyledone altera crassissime carnosa 2-fida alteram parvam includente, radicula parva sursum inflexa.—Arbores fruticesve glabri, spinis ramulos terminantibus v. brevibus lateralibus armati. Folia alterna, brevissime petiolata, paucidentata v. subintegerrima, pennivenia; stipulæ laterales, liberæ. Spicæ ♂ ad axillas subsessiles, brevissimæ, bracteis ∞ ferrugineis sepalis æqualibus similibusque stipatæ. Flores ♀ ad axillas solitarii, pedunculo fructifero longiusculo.

Species bene nota 1, in Peninsula Indiæ orientalis, Zeylania et Timor crescens. EPICARPURI species, *Dcne. Herb. Tim. Descr. in Ann. Mus. Par.* iii. *t.* 21. *Wight, Ic. t.* 1692 (*fig. superior et inferior dextra*). Huic forte addendus frutex Penangianus, *Wall. Cat. Herb. Ind. n.* 7519, cujus specimina ♂ tantum adsunt, iis *P. spinosi* similia nisi foliis minoribus apice retusis nec acuminatis.

Genus *Taxotrophi* valde affine, et ei a Blumeo adsociatum, differt tamen inflorescentia ♂, perianthio ♀ et embryone.

21. **Streblus,** *Lour. Fl. Cochinch.* 614. (Epicarpurus, *Blume, Bijdr.* 488.)—Flores dioici, ♂ capitato-glomerati, ♀ in pedunculo solitarii. Fl. ♂: Perianthium 4-partitum, segmentis latis imbricatis. Stamina 4, filamentis in alabastro inflexis, per anthesin porrectis exsertis. Ovarii rudimentum apice dilatatum. Fl. ♀: Perianthii segmenta 4, valde imbricata, ovarium arcte includentia, bracteis sæpius 3 subsimilibus stipata. Ovarium rectum, apice retusum; stylus centralis, alte 2-fidus, ramis stigmatosis elongatis subæqualibus; ovulum ab apice pendulum. Fructus subglobosus, rectus, perianthii segmentis paullo auctis laxe obtectus, stylo terminali; pericarpium membranaceum nec incrassatum. Semen globosum, testa membranacea; albumen 0; embryo globosus, cotyledone altera maxima crasso-carnosa 2-loba alteram parvam et radiculam sursum inflexam includente.—Arbor v. frutex ramosissimus, inermis, glaber, ramulis brevioribus sæpe rigescentibus. Folia alterna, breviter petiolata, subdentata, rigidula, scabra,

penniveuia; stipulæ laterales, parvæ, deciduæ. Capitula ♂ subglobosa uti flores ♀ pedunculata, pedunculis utriusque sexus ad axillas solitariis v. 2–4-nis. Bracteæ sub capitulo ♂ 2; bracteolæ in capitulo ∞, parvæ.

Species 1, Asiæ tropicæ a Zeylania et Peninsula Indica usque ad Archipelagum Malayanum et Chinam australem incola. *Bur. in DC. Prod.* xvii. 218. *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 30. *Wight in Hook. Journ. Bot.* i. *t.* 121 (*Trophis*), *et Ic. t.* 1961 (*Epicarpurus*).

Albrandia, *Gaudich. in Freyc. Voy.* 509 a Decaisneo Herb. Tim. Descr. 172 ad *Epicarpurum* refertur, in Prodromo prætermissa est.

22. **Maillardia,** *Frappier et Duchartre in Maill. Not. Ile Réun. Annexe* P.—Flores dioici, ♂ densissime spicati, ♀ solitarii. Fl. ♂: Perianthium 4-fidum v. 4-partitum, lobis segmentisve latis concavis imbricatis. Stamina 4, filamentis in alabastro inflexis, per anthesin porrectis exsertis. Ovarii rudimentum pilosum. Fl. ♀ bracteis 2–3-seriatim imbricatis involucrati: Perianthium ovoideum, ovario basi adnatum, ore minute 4-dentato foramine parvo pervio. Ovarium semi-adnatum, inclusum; stylus 2-partitus, ramis stigmatosis elongato-subulatis æqualibus, ovulum ex apice pendulum. Drupa globosa, subdepressa, apiculata, e perianthio cum ovario coadunato confecta. Seminis integumentum duplex, crustaceum, fragile (an potius endocarpium crustaceum, seminis testa membranacea?); albumen 0; cotyledones valde inæquales, altera conglobata maxima quasi complicata alteram minimam appressam planam fovente, radicula brevissima supera recta.—Arbor lactescens, inermis. Folia alterna, disticha, petiolata, integerrima, coriacea, nitida, pennivenia, costa venisque primariis transversis parallelis subtus prominentibus; stipulæ lineari-lanceolatæ, semet amplectentes, caducissimæ. Spicæ ♂ ad axillas solitariæ v. geminæ, longiusculæ, demum tenuiter cylindraceæ, floribus numerosissimis minimis sessilibus densissime confertis bracteis peltatis obtectis, rhachi longitrorsum uno latere anguste denudata. Flores ♀ ad axillas solitarii, pedunculati. Fructus ruber, cerasiformis. (*Char. fl. ex descr. Duchartre.*)

Species 1, ins. Borboniæ (La Réunion) incola. *Bur. in DC. Prod.* xvii. 220. Genus evidenter spicas ♂ *Slotiæ* ostendit, sed differt uti *Pseudostreblus* a *Bleekrodia* floribus ♀ a spicis ♂ segregatis. Specimen a Museo Parisiensi communicatum fructum unicum fert absque floribus.

23. **Malaisia,** *Blanco, Fl. Filip.* 789, *ed.* 2, 543. (Dumartroya, *Gaudich. Voy. Bonite, t.* 97. Cephalotrophis, *Blume, Mus. Bot. Lugd. Bat.* ii. 75, *t.* 27.)—Flores dioici, ♂ cylindraceo-spicati, ♀ globoso-capitati, receptaculo parvo. Fl. ♂: Perianthium 3-partitum, rarissime 4-partitum, segmentis valvatis. Stamina 3, rarissime 4, filamentis in alabastro inflexis per anthesin porrectis exsertis. Ovarii rudimentum parvum. Fl ♀: Perianthium urceolatum, ore contracto vix denticulato. Ovarium rectum, inclusum; stylus centralis, alte 2-fidus, ramis stigmatosis filiformibus; ovulum sub apice affixum, pendulum. Capitula fructifera parum aucta. Achænium perianthio tenuiter carnosulo arcte inclusum; pericarpium tenuiter coriaceo-carnosum. Semen conforme, testa membranacea, pericarpio plus minus adhærente; albumen 0 v. perparcum v. rarius partim incrassatum et inter fissuram cotyledonis majoris intrusum; embryo globosus v. ovoideus, cotyledone altera crasso-carnosa, uno latere fissa sub-2-loba, alteram parvam plicatam radiculamque amplectens.—Frutex inermis, tortuoso-ramosus v. scandens, præter inflorescentiam canotomentosam glaber. Folia alterna, breviter petiolata, integerrima v. obscure dentata, scabriuscula v. supra lævia, subtus prominenter pennivenia et reticulata; stipulæ laterales, parvæ, deciduæ. Spicæ ♂ densiusculæ, breviter pedunculatæ, simplices v. rarius parce ramosæ. Capitula ♀ parva, pedunculata, bracteolis carnosulis arcte contiguis canotomentosa, pedunculis ad axillas solitariis v. pluribus fasciculatis; flores ♀ inter bracteolas immersi, 1–2 tantum sæpius fertiles, cæteris capituli sterilibus. Receptaculum fructiferum parum auctum, globosum v. oblongum, bracteolis minimis carnosis obtusis quasi lobatum. Fructus sæpius in quoque capitulo 1–2, glaberrimi, læves, receptaculo ipso majores.

Species 1, Archipelagi Malayani, Australiæ tropicæ et insularum maris Pacifici incola, quoad folia et inflorescentiam simplicem v. ramosam valde variabilis. *Bur. in DC. Prod.* xvii. 221.

Seemann in Fl. Vit. 256, hoc genus ad CATURUM '*Lour. non Linn.*' refert, et species 9 distinguit. Loureiro tamen nullum genus sub hoc nomine condidit, sed hanc plantam perperam ad *Caturum*, Linn., retulit et characterem Linneanum (ad *Acalyphæ* speciem pertinentem) transcripsit. Nomen igitur Blancoi jure prioritatis gaudet, et species omnes a Seemannio citatæ rite a Bureau pro unius varietatibus habentur.

24. **Broussonetia,** *Vent. Tabl. Regn. Veget.* iii. 547.—Flores dioici, ♂ cylindraceo-spicati, ♀ globoso-capitati. Fl. ♂: Perianthium 4-fidum v. 4-partitum, lobis segmentisve membranaceis valvatis. Stamina 4, filamentis in alabastro inflexis, per anthesin porrectis exsertis. Ovarii rudimentum parvum. Fl. ♀: Perianthium ovoideum v. tubulosum, 3–4-dentatum. Ovarium inclusum, stipitatum; stylus subulatus, indivisus, fere a basi stigmatoso-puberulus; ovulum sub apice lateraliter affixum, pendulum. Capitula fructifera globosa, perianthiis persistentibus bracteisque intermixtis arcte confertis tomentoso-villosis. Fructus stipite elongato crassiusculo e perianthio protrusus; exocarpium basi carnosum cum stipite continuum, superne attenuatum, stylo excentrico coronatum; endocarpium in parte superiore seminiforme, crustaceum, rugosum. Semen endocarpio conforme, testa submembranacea ei arcte appressa subadnata; embryo recurvus, albumine partim immersus, cotyledonibus æqualibus oblongis, radicula incurvo-ascendente incumbente.—Arbores lactescentes. Folia alterna, petiolata, molliter rugosa et villosa, serrulata, indivisa v. 3-loba rarius 5-loba, pennivenia et basi 3-nervia; stipulæ laterales, membranaceæ, deciduæ. Spicæ ♂ amentiformes et capitula ♀ globosa ad axillas v. nodos defoliatos solitaria, breviter pedunculata.

Species 2 v. 3, Archipelagi Malayani, Chinæ et Japoniæ incolæ, quarum una in variis regionibus diu culta. *Bur. in DC. Prod.* xvii. 224 (excl. *B. luzonica* quæ *Allæanthi* species). *Correa de Serre in Ann. Mus. Par.* viii. *t.* 34. *Ser. Descr. et Cult. Mur. t.* 26. *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 40. *Baill. Adans.* i. *t.* 8. *Andr. Bot. Rep. t.* 488. *Bot. Mag. t.* 2358.

STENOCHASMA, *Miq. Pl. Jungh.* i. 45 e Sumatra, a nobis non visum, e planta fœminea sola notum est et dubium remanet an ad *Moreas* an ad *Artocarpeas* referendum sit. Flores fœminei descripti *Parartocarpo* accedere videntur, sed folia 3-nervia villosa, petiolis pedunculisque longiusculis potius *Broussonetiam* indicant, a qua fructu (immaturo?) incluso recedit.

25. **Allæanthus,** *Thwaites in Hook. Kew Journ.* vi. 302, *t.* 9.—Flores dioici, ♂ dense et anguste cylindraceo-spicati, ♀ globoso-capitati. Fl. ♂: Perianthium 4-fidum, lobis leviter imbricatis. Stamina 4, filamentis in alabastro inflexis, per anthesin porrectis exsertis. Ovarii rudimentum parvum. Fl. ♀: Perianthium tubulosum, 4-dentatum. Ovarium inclusum, sessile, rectum; stylus sub anthesi terminalis, subulatus, indivisus et fere a basi stigmatosus v. rarius ramo brevi auctus; ovulum sub apice lateraliter affixum, pendulum. Capitula fructifera globosa, perianthiis persistentibus bracteisque intermixtis arcte confertis tomentoso-villosis. Achænium sessile, perianthio inclusum apice obliquum, stylo sublaterali; pericarpium tenuiter coriaceum, maturum interdum dehiscens. Semen conforme, testa membranacea; albumen 0; embryo recurvus, cotyledonibus latis valde corrugato-plicatis, radicula incumbente ascendente.—Arbores lactescentes. Folia alterna, petiolata, ex ovato lanceolata, integerrima v. serrulata, a basi pennivenia nec 3-nervia; stipulæ laterales, membranaceæ, deciduæ. Spicæ ♂ quam in *Broussonetia* multo longiores (interdum pedales et ultra) angustiores densioresque, ad axillas v. ad nodos defoliatos uti capitula ♀ solitariæ, breviter pedunculatæ.

Species 2, altera Zeylanica, *Bur. in DC. Prod.* xvii. 223. *Bedd. Fl. Sylv. t.* 305, altera ins. Philippinarum incola, *Morus luzonica,* Blanco, a Bureau in Prodromo ad *Broussonetiam* relata, sed ex speciminibus Cumingianis a Bureau citatis, quoad folia, flores et spicas ♂, flores ♀ et fructus, omnino *Allæanthi* nec *Broussonetiæ* species.

26. **Plecospermum,** *Tréc. in Ann. Sc. Nat. ser.* 3, viii. 124, *t.* 4.—Flores dioici, utriusque sexus globoso-capitati. Fl. ♂: Perianthium alte 4-fidum, lobis latis concavis imbricatis. Stamina 4, filamentis in alabastro inflexis, per anthesin porrectis exsertis. Ovarii rudimentum parvum, piloso-lanatum. Fl. ♀: Perianthia carnosa, arcte conferta v. in massam carnosam ∞-locularem connata, ore cujusve perianthii minimo 4-dentato fere

clauso. Ovarium inclusum, rectum; stylus filiformis, indivisus, longe stigmatosus, e foramine perianthii exsertus; ovulum sub apice lateraliter affixum, pendulum. Syncarpium globosum v. latius et subdidymum, e perianthiis carnosis arcte confertis v. conferruminatis compositum. Achænia in toto syncarpio perpauca, sæpius 1–2 perfecta, ovoideo-globosa, parum obliqua; pericarpium coriaceum, parietibus loculi (perianthio) arcte adhærens. Semen conforme, testa membranacea (semel carnoso-incrassatam vidimus); albumen 0; embryo subglobosus, cotyledone altera maxima crasso-carnosa alteram parvam plicatam includente, radicula brevi sursum incurva.—Arbores v. frutices glabri, spinis validis axillaribus v. lateralibus armati. Folia alterna, integerrima, penninervia; stipulæ minimæ. Pedunculi axillares, breves, sæpius gemini. Bracteolæ in capitulo flores subtendentes, v. in capitulo ♀ 0 v. a perianthiis non distinguendæ.

Species 2, quarum typica Indiæ orientalis incola. *Bur. in DC. Prod.* xvii. 233. *Wight, Ic. t.* 1963. Huic tamen addenda videtur pro sectione floribus fœmineis distinguenda, CARDIOGYNE, *Bur. in DC. Prod.* xvii. 232, jam in *Journ. Linn. Soc.* ix. 229, a Kirkio memorata, sub nomine *Cudraniæ* speciei novæ. Frutex est v. arbuscula, in Africa tropica orientali ad fl. Zambesi et in Zanguebaria frequens, lignum tinctorium præbens. Habitus folia spinæ inflorescentia utriusque sexus et flores ♂ omnino *Plecospermi spinosi*. Specimina nostra omnia mascula sunt; in capitulis tamen fœmineis a Bureau descriptis perianthia bracteis intermixta et nullo modo connata, apice 4-loba, dum in *Plecospermo spinoso* perianthia fœminea jam sub anthesi alte connata sunt, apice solo hemisphærico distincta et mox in syncarpium carnosum omnino concreta bracteis haud conspicuis. Ovarium in *Cardiogyne* ex Bureau obovatum v. obcordatum est; in *P. spinoso* latum obtusissimumque vidimus nec nisi abortivum angustum ut in icone Treculiana. Fructus *Cardiogynis* nec a Bureau nec a nobis visus, ex schedis Kirkianus syncarpium est succulentum et edule. Genus *Plecospermum* sæpe in herbariis cum *Cudrania* confunditur, et habitu foliis inflorescentiaque simillimum est, sed floribus utriusque sexus fructuque facile dignoscitur.

27. **Sagassa**, *Aubl. Pl. Gui. Suppl.* 15, *t.* 376. (Laurea, *Gaudich. Voy. Bonite*, *t.* 88.) —Flores dioici, ♂ densissime cylindraceo-spicati, ♀ globoso-capitati. Fl. ♂: Perianthium minimum, 4-partitum, segmentis apice concavis leviter imbricatis. Stamina 4, filamentis in alabastro summo apice inflexis, antheris reversis, per anthesin porrectis exsertis. Ovarii rudimentum subulato-acuminatum. Fl. ♀: Perianthium masculo multo majus, tubulosum, apice 4-fidum. Ovarium inclusum, liberum; stylus terminalis, exsertus, 2-partitus, ramis stigmatosis filiformibus; ovulum sub apice affixum, pendulum. Perianthia fructifera subcarnosa, receptaculo carnoso subgloboso imposita, in pseudosyncarpium majusculum subglobosum arcte conferta at distincta. Achænium inclusum, apice obliquum, stylo sublaterali; pericarpium rigide membranaceum. Semen sub apice lateraliter affixum, testa membranacea; albumen parcum v. 0; cotyledones carnosulæ, æquales, radicula supera hilum versus incurva.—Arbores proceræ, lactescentes. Folia opposita, cujusve paris sæpius inæqualia, petiolata, lata, cordata, integra v. late 3-loba, integerrima v. crenulata, basi 3-nervia; stipulæ utrinque in unam interpetiolarem connatæ. Inflorescentiæ axillares, breviter pedunculatæ, ♂ geminæ, ♀ (an semper?) solitariæ. Flores ♂ minimi, numerosissimi, rhachin spicæ seu receptaculum lineare carnosulum undique densissime obtegentes, bracteolis perianthio brevioribus. Filamentorum inflexio minus distincta quam in cæteris *Moreis*, antheræ tamen in alabastro bene reversæ. Pseudosyncarpia ultra pollicem diametro, perianthiis fructiferis basi carnosis receptaculum undique obtegentibus nec immersis.

Species 2 v. 3 Guianæ gallicæ et Brasiliæ borealis incolæ. Species typica *B. guianensis*, Aubl., foliis rugosis 3-lobis crenulatis nobis sola nota est ex icone Aubletiana et speciminibus Sagotianis plantæ ♀; speciei alterius pariter Guianensis, *B. Sagotianæ*, Bur., specimina ♂ et ♀ examinavimus in Museo Parisiense servata et nobis a cl. Bureau benevole commodata, mascula jam a Gaudichaudio depicta et a Weddellio in DC. Prod. xvi. i. 235[14], sub nomine *Laureæ* descripta et *Urticeis* anomalis adscripta, fœminea a Sagotio aliisque in Guiana lecta. A specie Aubletiana differunt foliis integerrimis vix rugosis subtus pallidis v. subcanescentibus. Speciem verisimiliter tertiam legit Spruce in vicinis Para, inter illas quasi mediam, sed flores et fructus desunt. Genus pluribus characteribus *Chlorophoræ* accedit, et evidenter ad *Moreas* pertinet, etsi quoad folia et stipulas in ordine distinctissimum.

28. **Chlorophora**, *Gaudich. in Freyc. Voy. Bot.* 509.—Flores dioici, ♂ cylindraceo-spicati, ♀ globoso- v. oblongo-capitati. Fl. ♂: Perianthium 4-partitum, segmentis latis obtusis leviter imbricatis. Stamina 4, filamentis in alabastro inflexis, per anthesin porrectis exsertis. Ovarii rudimentum minutum. Fl. ♀: Perianthium alte 4-fidum v. 4-partitum, segmentis apice incrassatis concavis imbricatis. Ovarium inclusum, obliquum; stylus sublateralis, filiformis, longe stigmatosus, indivisus v. ramo breviore instructus; ovulum lateraliter affixum, descendens. Perianthia fructifera subcarnosa, in pseudo-syncarpium globosum v. oblongum arcte conferta at solubilia. Achænium perianthio æquale v. subexsertum, ovatum, compressum, apice valde obliquum; pericarpium coriaceum. Semen conforme, testa membranacea; albumen 0; embryo incurvus, cotyledonibus ovatis æqualibus, radicula incumbente ascendente.—Arbores lactescentes, spinis raris axillaribus v. lateralibus armatæ v. inermes. Folia alterna, petiolata, integerrima v. dentata, penninvenia; stipulæ laterales, caducæ. Inflorescentiæ utriusque sexus ad axillas breviter pedunculatæ, solitariæ. Spicæ ♂ amentiformes, densæ, longiusculæ, bracteis parvis. Capitula ♀ nunc exacte globosa, nunc oblongo-cylindracea, crassa. Bracteæ perianthii segmentis similes iisque æquilongæ, interdum apice intus glandulis 2 incrassatæ.

Species 2, altera Americæ tropicæ, altera Africæ tropicæ, incola. *Bur. in DC. Prod.* xvii. 228 (*Macluræ sect.*). *Vell. Fl. Flum. Ic.* x. *t.* 22 (*Morus*).

Genus pluribus notis *Allæanthio* affinius quam *Macluræ*, ab hoc valde differt inflorescentia maris, floribus fœmineis et syncarpio imperfecto. Species Americana *C. tinctoria*, Gaud., a Miquelio in Mart. Fl. Bras. iv. i. 154, t. 51 ad 53, in species 6 divellitur quas Bureau iterum sub *Maclura tinctoria* junxit. Huic pseudosyncarpium globosum rarius parum elongatum, rhachi seu receptaculo carnoso oblongo. In specie Africana, *C. excelsa* (*Morus excelsa*, Welw. in Trans. Soc. Linn. xxvii. 69, t. 23. *Maclura excelsa*, Bur.) pseudosyncarpium bis terve longius quam latum, cæterum characteres exhibet omnino *Chlorophoræ* nec *Mori* nec *Macluræ*. *Broussonetia brasiliensis*, Mart., a Miq. in Mart. Fl. Bras. iv. i. 158, t. 54, ad *Macluram* relata, solum nota est e stirpe mascula in herb. Mart. servata, quæ floribus globoso-capitatis, ex icone receptaculum globosum obtegentibus, nec *Macluræ* nec *Chlorophoræ* convenit, et quoad genus dubia remanet.

29. **Maclura**, *Nutt. Gen. Pl. N. Amer.* ii. 233; *N. Amer. Sylv.* i. *t.* 37, 38.—Flores dioici, ♂ laxe racemulosi, ♀ dense globoso-capitati. Fl. ♂ (a nobis non visi): Perianthium 4-partitum, segmentis valvatis. Stamina 4, filamentis in alabastro inflexis per anthesin porrectis exsertis. Ovarii rudimentum? Fl. ♀: Perianthium alte 4-fidum, lobis inæqualibus lineari-clavatis crassis concavis arcte appressis. Ovarium inclusum, sessile, obovoideum; stylus filiformis, longe stigmatosus, indivisus v. ramo breviore instructus; ovulum ex apice pendulum. Perianthia fructifera aucta, carnosa, alte in syncarpium magnum globosum extus rugosum arcte concreta, nec facile seorsum nec a receptaculo distinguenda. Achænia parva, in syncarpio sæpe pauca perfecta, in fundo perianthiorum occulta; pericarpium coriaceum. Semen conforme; albumen 0; embryo recurvus, cotyledonibus oblongis subæqualibus, radicula incumbente ascendente.—Arbor lactescens, spinis axillaribus v. supra-axillaribus (pedunculis abortivis?) armata. Folia alterna, petiolata, integerrima, pennivenia; stipulæ laterales, caducæ. Inflorescentiæ ad axillas solitariæ, breviter pedunculatæ. Syncarpia matura viridi-flavescentia, ad 2 poll. diametro. (*Char. fl.* ♂ *ex Ser. et Nutt.*)

Species 1, Americæ borealis regionis Arkansanæ incola. *Bur. in DC. Prod.* xvii. 227, *excl.* § 2. *Lambert, Pinus*, ii. *t.* 12. *Seringe, Not. Maclure, Lyon*, 1837, *cum ic. bona*, *Descr. et Cult. Mur. t.* 27. *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 37.

30. **Pachytrophe**, *Bur. in DC. Prod.* xvii. 234.—Flores dioici, utriusque sexus cylindraceo-spicati. Fl. ♂: Perianthium 4-partitum, segmentis ovatis obtusis concavis leviter imbricatis (valvatis, *Bur.*). Stamina 4, filamentis in alabastro inflexis, per anthesin porrectis exsertis. Ovarii rudimentum quadratum. Fl. ♀: Perianthii segmenta 4, lata, rotundata, valde imbricata. Ovarium obliquum, subglobosum; stylus parum excentricus, fere ad basin 2-partitus, ramis stigmatosis filiformibus subæqualibus; ovulum a placenta valde dilatata dorso sub apice affixum, pendulum. Fructus (a nobis non visus) perianthii segmentis succulentis et baccam simulantibus involutus; pericarpium extus carnosum, intus pergameneum, placenta sub originis styli indurata. Semen subglobosum, testa

membranacea; cotyledones foliaceæ, plicatæ, radicula supera longa.—Frutices teneri, glabri, ramosissimi, inermes. Folia alterna, petiolata, abrupte acuminata, integerrima, pennivenia, venis primariis fere transversis crebris; stipulæ in unam intrapetiolarem connatæ. Spicæ utriusque sexus amentiformes, breves, fere sessiles, ♂ sæpius geminæ v. ad innovationes fasciculatæ, ♀ ad axillas solitariæ. (*Char. fructus ex Bureau.*)

Species 2, Madagascarienses. Habitu *Ampali* accedunt sed præter characteres florales foliorum venatione facile distinguuntur.

31. **Paratrophis,** *Blume, Mus. Bot. Lugd. Bat.* ii. 81.—Flores dioici v. monoici, utriusque sexus spicati. Fl. ♂: Perianthium 4-partitum, segmentis latis obtusis concavis leviter imbricatis. Stamina 4, filamentis in alabastro inflexis, per anthesin porrectis exsertis. Ovarii rudimentum turbinatum. Fl. ♀: Perianthium minimum, 4-partitum, segmentis imbricatis. Ovarium sessile, exsertum, rectum; stylus centralis, fere a basi 2-partitus, ramis stigmatosis linearibus; ovulum sub apice affixum, pendulum. Achænium subdrupaceum, parvum, ovoideum, perianthio parvo persistenti basi stipatum, apice stylo brevi mucronatum; exocarpium tenuiter carnosulum; endocarpium crustaceum. Semen subglobosum, pendulum, testa membranacea; albumen 0 v. in parte inferiore parcum et inter plicas embryonis leviter intrusum; cotyledones subcarnoso-foliaceæ, subæquales, latissimæ, contortuplicatæ, radiculam ascendentem amplectentes.— Arbores excelsæ, lactescentes. Folia alterna, breviter petiolata, crenata v. subintegerrima, pennivenia; stipulæ laterales, caducæ. Spicæ axillares, ♂ breviter amentiformes, ♀ laxifloræ, v. utriusque sexus elongatæ floribundæ. Inflorescentia ♂ in specie typica haud raro monstrosa paniculato-ramosissima bracteis numerosissimis minimis vacuis obtecta.

Species 4, quarum typica 1, Novo-Zelandica, parvifolia, brevispica. *Bur. in DC. Prod.* xvii. 235. *Raoul Choix, Pl. Nouv. Zel. t.* 9 (*Epicarpurus*), ab hac tamen generice non separandus videtur Uromorus, *Bur. in DC. Prod.* xvii. 236, *Seem. Fl. Vit. t.* 73 (*Trophis*), species 3 ex insulis maris Pacifici et Philippinarum continens. Characteres floris et fructus omnino *Paratrophidis*, habitu solo differunt. Folia enim multo majora et spicæ utriusque sexus elongatæ floribundæ, differentiæ non majores quam illæ quæ *Morum pendulinum*, Endl., a *M. Brunoniano*, Endl., separant, quas Bureau pro varietatibus unius speciei *Pseudomori* habet.

32. **Pseudomorus,** *Bur. in Ann. Sc. Nat. ser.* 5, xi. 371, *et in DC. Prod.* xvii. 249.—Flores monoici v. dioici, utriusque sexus spicati. Fl. ♂: Perianthium 4-partitum, segmentis latis concavis leviter imbricatis. Stamina 4, filamentis in alabastro inflexis, per anthesin porrectis exsertis. Ovarii rudimentum obovoideum. Fl. ♀: Perianthium parvum, 4-partitum, segmentis imbricatis. Ovarium sessile, exsertum; stylus centralis, fere ad basin 2-partitus, ramis stigmatosis linearibus æqualibus; ovulum ab apice pendulum. Achænium drupaceum, parvum, subglobosum, perianthio immutato insidens; exocarpium tenue succulentum; endocarpium crustaceum. Semen conforme, testa tenuiter membranacea; albumen ad basin seminis parcum v. 0; embryo subglobosus, cotyledonibus crasso-carnosis, altera majore curvula alteram minorem subglobosam fovente, radicula recurvo-ascendente.—Arbor v. frutex lactescens. Folia alterna, breviter petiolata, integerrima v. denticulata, pennivenia; stipulæ laterales, lanceolatæ, parvæ, deciduæ. Spicæ axillares, breviter pedunculatæ, ♂ amentiformes, breves v. valde elongatæ, dense floribundæ, ad axillas solitariæ v. geminæ, bracteis parvis; ♀ breviter cylindraceæ oblongæ v. subcapitatæ, floribus paucis arcte contiguis sessilibus.

Species 1, Australiæ et insulæ Norfolk incola. *Endl. Atakta, t.* 32 (*Morus*).

Genus *Paratrophidi* valde affine, nec nisi floribus ♀ confertioribus et embryone distinguendum.

33. **Morus,** *Linn. Gen. n.* 1055. — Flores monoici v. dioici, utriusque sexus spicati. Fl. ♂: Perianthium 4-partitum, segmentis ovatis imbricatis. Stamina 4, filamentis in alabastro inflexis, per anthesin porrectis exsertis. Ovarii rudimentum turbinatum. Fl. ♀: Perianthii segmenta 4, ovata, decussatim imbricata, in fructu succulenta. Ovarium inclusum, ovoideum v. subglobosum; stylus centralis, fere ad basin 2-partitus, ramis stigmatosis linearibus æqualibus; ovulum ab apice pendulum. Fructus perianthio aucto succulento inclusus; exocarpium plus minus succulentum, tenue v. crassissimum; endocarpium crustaceum. Semen subglobosum, testa membranacea; albumen carnosum, sat

copiosum; embryo incurvus, cotyledonibus oblongis æqualibus, radicula sursum incumbente.—Arbores v. frutices lactescentes. Folia alterna, dentata, integra v. 3-loba, basi 3-nervia; stipulæ laterales, parvæ, caducæ. Spicæ ad axillas solitariæ, breviter pedunculatæ, ♂ longæ v. cylindraceæ amentiformes; ♀ nunc elongatæ densifloræ fructibus parum succulentis, nunc breves, densissime oblongæ v. fere globosæ, perianthiis valde succulentis arcte contiguis, baccam seu syncarpium bacciforme simulantibus sed revera semper distinctis.

Species a variis auctoribus descriptæ 10–12, a Bureau (Botanicis Indicis vix assentientibus) ad 5 reductæ, regionum temperatarum hemisphærii borealis et montium inter tropicos utriusque orbis incolæ. *Bur. in DC. Prod.* xvii. 238. *Ser. Descr. et. Cult. Mur. Paris*, 1855, *cum tabulis* 25. *Wats. Dendrol. Brit. t.* 149. *Nees, Gen. Fl. Germ. Monochl. n.* 32. *Reichb. Ic. Fl. Germ. t.* 657, 658. *Pall. Fl. Ross. t.* 52. *Dcne. in Jacquem. Voy. Bot. t.* 151. *Wight, Ic. t.* 674, 675, 677. *Brand. For. Fl. t.* 47.

34. **Ampalis,** *Boj. Hort. Maurit.* 291.—Flores dioici, utriusque sexus spicati. Fl. ♂: Perianthium 4-partitum, segmentis ovatis lævissime imbricatis v. subvalvatis. Stamina 4, filamentis in alabastro inflexis, per anthesin porrectis exsertis. Ovarii rudimentum truncatum. Fl. ♀: Perianthii segmenta 4, rotundata, decussatim imbricata, fructifera carnosa. Ovarium inclusum, compressum; stylus centralis v. parum excentricus, fere ad basin 2-partitus, ramis stigmatosis rigide filiformibus; ovulum ab apice pendulum. Fructus (a nobis non visus) perianthio carnoso subinclusus, globoso-subcompressus, stigmatibus persistentibus superatus, achænium mentiens sed vere drupeolatus, endocarpio corneo tenui. Semen pendulum, testa tenuissime membranacea; albumen 0; cotyledones crassæ, facie plana contiguæ, in molem obconico-compressam coactæ; radicula cotyledones æquans marginibus sursum accumbens. Arbor frondosa, succo opalino. Folia alterna, petiolata, apice rotundata v. brevissime obtuseque acuminata, coriacea, integerrima, pennivenia; stipulæ laterales, caducissimæ. Spicæ in axillis brevissime pedunculatæ, densæ, sæpius breviter cylindraceæ. (*Char. fruct. ex Bureau.*)

Species 1, Madagascariensis, in hortis botanicis inter tropicos sæpe culta. *Bur. in DC. Prod.* xvii. 251. *Jacq. Ic. Rar. t.* 617 (*Morus*).

Genus *Moro* valde affine, differt habitu, foliis, et ex Bureau embryone. Radiculam cotyledonibus accumbentem adhuc in *Moreis* non observavimus.

35. **Trophis,** *Linn. Gen. n.* 1103. (Bucephalon, *Linn. Gen. n.* 1230.)—Flores dioici, spicati v. racemosi. Fl. ♂: Perianthium 4-partium v. 4-fidum, segmentis lobisve crassiusculis valvatis. Stamina 4, filamentis in alabastro inflexis, per anthesin porrectis exsertis. Ovarii rudimentum obovoideum v. turbinatum. Fl. ♀: Perianthium tubulosum, carnosulum, ovario adnatum, superne circa stylum breviter liberum, ore contracto 4-dentato. Ovarium inferum, carnosum; stylus intra perianthium liber, conicus v. subcylindraceus, apice exsertus 2-partitus, ramis stigmatosis brevibus v. elongatis filiformibus sæpe recurvis; ovulum ex apice loculi pendulum. Fructus globosus, carnosus, pericarpio perianthiique tubo arcte concretis, limbo minimo coronatus. Semen globosum, testa tenui; albumen 0; embryo rectus, cotyledonibus carnosis æqualibus semiglobosis, radicula brevissima supera.—Arbores fruticesve. Folia alterna, petiolata, integerrima v. paucidentata, ramorum sterilium interdum lobata, subtus prominenter pennivenia et reticulata; stipulæ laterales, minimæ, caducæ. Spicæ v. racemi in axillis solitarii v. gemini, ♂ laxe floribundi, ♀ sæpius breves pauciflori, floribus sessilibus v. breviter pedicellatis. Bracteæ minimæ.

Species 5 v. 6, v. apud Bureau pauciores, Indiæ occidentalis Mexici et Americæ australis Andinæ incolæ. *Bur. in DC. Prod.* xvii. 252. *P. Br. Hist. Jam. t.* 37. *Plum. Ic. ed. Burm.* 67. *Lam. Illustr. t.* 806 (*Bucephalon*).

Genus pluribus notis, imprimis ovario infero cum *Sorocea* convenit et specimina sæpe in herbariis confusa; differt tamen floribus ♂ *Morearum* nec *Artocarpearum* et embryone.

36. **Sloetia,** *Teijsm. et Binnend. ex Kurz in Journ. Linn. Soc.* viii. 167, *t.* 13.—Flores monoici, in spicas amentiformes androgynas v. masculas densissime conferti. Fl. ♂: Perianthium alte 3-fidum, lobis membranaceis apice rotundatis leviter imbricatis. Stamina

3, filamentis in alabastro inflexis, per anthesin porrectis exsertis. Ovarii rudimentum parvum, elongato-conicum. Fl. ♀: Perianthium 4-partitum, segmentis latis decussatim imbricatis, exterioribus paullo majoribus interiora et ovarium rectum arcte obtegentibus. Stylus subcentralis, 2-partitus, ramis stigmatosis longissime filiformibus; ovulum sub apice affixum, pendulum. Fructus ovoideo-globosus, primum perianthio aucto inclusus, rectus, stylo persistente terminatus, 'maturescens contactu etiam lævi elastice exsiliens' (*Kurz*). Semen (in speciminibus nostris immaturum) 'obovatum; albumen ut videtur 0; cotyledones latæ, inæquales, submembranaceæ, majore paullulum concava marginibus inflexis, minore interiore, radicula longiuscula ad hilum versa' (*Bureau*).—Arbor vasta, lactescens, ligno duro. Folia alterna, breviter petiolata, sæpe ampla, integerrima, pennivenia; stipulæ laterales, lineari-lanceolatæ, caducissimæ. Spicæ ad axillas solitariæ v. geminæ, longiusculæ. Flores ♂ numerosissimi, minimi, sessiles, juniores in rhache leviter complanata uno latere densissime conferti, bracteis peltatis obtecti, per anthesin rhachin undique obtegentes, et spica cylindracea evadit. Flores ♀ perpauci, in parte inferiore spicæ sparsi, masculis multo majores eminentesque, in spicis pluribus omnino desunt.

Species 1, Archipelagi Malayani incola. *Bur. in DC. Prod.* xvii. 257. Huc pertinent etiam specimina Penangiana, *Wall. Cat. Herb. Ind. n.* 9090, et Malaccensia a Maingayo lecta. In horto Calcuttensi colebatur sub nomine *Mori bifarii.*

37. **Dorstenia,** *Linn. Gen. n.* 158. (Kosaria, *Forsk. Fl. Æg. Arab.* 164; *Ic. t.* 20. Sychinium, *Desv. in Mem. Soc. Linn. Par.* iv. 216, *t.* 12.)—Flores monoici, in receptaculo explanato androgyno densissime conferti. Perianthia utriusque sexus in stratum carnosum receptaculi superficiem vestientem plus minus connata, alveolas unisexuales formantia; limbi interdum ad margines alveolarum leviter prominuli obscure 2-lobi v. 2-dentati. Alveolæ ♂ parum immersæ, perianthii lobis interdum distincte prominentibus crassis. Stamina 2, rarius 1 v. 3, filamentis primum inflexis, demum porrectis exsertis. Ovarii rudimentum 0. Alveolæ ♀ profundius excavatæ, ore sæpe subclauso, foramine circa stylum minuto. Ovarium inclusum; stylus excentricus v. fere lateralis, exsertus, superne 2-fidus, ramis stigmatosis subulatis; ovulum ex apice pendulum. Fructus demum ex alveolis protrusi, parvi; exocarpium carnosulum; endocarpium crustaceum. Semen endocarpio conforme, testa tenuiter membranacea; albumen 0; cotyledones subæquales, contortuplicatæ, radiculam ascendentem amplectentes.—Herbæ perennes v. frutices parvi, lactescentes, habitu vario, rhizomate v. caule sæpe incrassato. Folia nunc in rhizomate longe petiolata, integra v. lobata, basi sæpius 3–5-nervia, nonnunquam peltata, nunc in speciebus caulescentibus alterna, integerrima, pennivenia; stipulæ laterales, distinctæ, caducæ v. diu persistentes. Receptacula ad axillas longe pedunculata, forma etiam in eadem specie valde variabilia, concava v. plana, orbiculata v. quadrata et integerrima v. varie lobata, nunc in lacinias 2–3 longas angustas fimbriatasque divisa, v. margine circa discum floridum incrassata v. membranacea. Flores utriusque sexus numerosi, minimi, intermixti, fœminei sæpius masculis 3–4 circumdati, v. rarissime receptacula unisexualia. Bracteæ inconspicuæ.

Species editæ 45, quarum una Asiatica in India orientali, cæteræ omnes Americæ v. Africæ tropicæ incolæ. *Bur. in DC. Prod.* xvii. 259. *Wight, Ic. t.* 1964. *Schweinf. Pl. Nilot. t.* 12. *Ruiz et Pav. Fl. Per. et Chil. t.* 102. *Vell. Fl. Flum. Ic.* i. *t.* 137 *ad* 142. *Miq. in Mart. Fl. Bras.* iv. i. *t.* 55 *ad* 61. *Moric. Pl. Nouv. Amer. t.* 58, 59, 64. *Field. et Gardn. Sert. Pl. t.* 13, 14. *Jacq. Ic. Rar. t.* 614. *Hook. Exot. Fl. t.* 6; *Ic. Pl. t.* 220, 399. *Bot. Mag. t.* 2017, 2476, 2760, 2804, 5795, 5908. *Lodd. Bot. Cab. t.* 677, 999, 1005, 1216, 1784. *Lemaire, Illustr. Hortic. t.* 362. *Saund. Ref. Bot. t.* 303.

38. **Trymatococcus,** *Pœpp. et Endl. Nov. Gen. et Sp.* ii. 30, *t.* 142, *ic. in Mart. Fl. Bras.* iv. i. *t.* 35 *repetita.*—Flores monoici, receptaculo primum cylindraceo v. turbinato mox globoso androgyno affixa. Fl. ♂ in margine receptaculi numerosi: Perianthium minimum, 3–4-fidum, lobis subvalvatis. Stamina 3–4, filamentis primum inflexis demum porrectis exsertis. Ovarii rudimentum 0. Fl. ♀ in fundo receptaculi solitarius. Perianthium receptaculo arcte adnatum, apice brevissime liberum, ore contracto subdentato. Ovarium inclusum, rectum; stylus exsertus, superne bifidus, ramis stigmatosis filiformibus

æqualibus; ovulum ab apice pendulum. Fructus receptaculo globoso floribus masculis persistentibus coronato inclusus; pericarpium receptaculo adnatum. Semen globosum, apice lateraliter affixum, testa tenuiter subcoriacea; albumen 0; embryo globosus, cotyledonibus crassissimis carnosis parum v. valde inæqualibus, radicula brevissima inclusa.—Arbores fruticesve haud lactescentes (*Pœppig*). Folia alterna, breviter petiolata, integerrima, subtus prominenter pennivenia et reticulato-venulosa; stipulæ laterales, parvæ, caducissimæ. Receptacula in axillis solitaria v. fasciculata, breviter pedunculata, primum saltem in specie africana tubo turbinato margine expansa, fructifera in utraque specie globosa, ore contracto, massa florum masculorum marcescentium coronato. Stylus sub anthesi inter flores masculos numerosissimos occultus, mox exsertus.

Species 2, altera regionis Amazonicæ Americæ australis, altera Africæ tropicæ occidentalis incola. *Bur. in DC. Prod.* vii. 278. *Baill. Adans.* xi. 300.

Genus florum in receptaculo dispositione *Lanessaniæ* et *Bosquieæ* accedit, sed flores ♂ *Morearum* nec *Artocarpearum*.

Tribus V. Artocarpeæ.

39. **Ficus**, *Linn. Gen. n.* 1168.—Flores monoici v. rarissime dioici, receptaculo carnoso globoso ovoideo pyriformi v. rarius oblongo sæpissime androgyno ad os parvum ∞-seriatim bracteato inclusi. Fl. ♂: Perianthium 2–6-fidum v. partitum, lobis segmentisve imbricatis, rarissime ad squamam unicam reductum. Stamina 1–2, v. rarius 3–6, filamentis brevibus rectis; antheræ exsertæ v. inclusæ, ovatæ v. oblongæ. Ovarii rudimentum 0. Fl. ♀: Perianthii segmenta quam in mare sæpius pauciora angustioraque, nunc tamen tenuia et late imbricata v. minuta v. 0. Ovarium rectum v. mox obliquum; stylus saltem post fecundationem excentricus v. lateralis, brevis v. filiformis, apice in stigma peltatum, cavum, oblongo-lanceolatum, lineari-lanceolatum v. longe caudatum rarius inæqualiter 2-crure dilatatus; ovulum apice v. sub apice lateraliter affixum, pendulum. Achænia receptaculo sæpe aucto arcte inclusa, perianthio fructifero immutato v. rarius succulento stipata v. vestita, v. in paucis speciebus nuda; pericarpium crustaceum induratum siccum v. extus succulentum, rarius totum carnosum. Semen pendulum, testa membranacea; albumen sæpius parcum; embryo curvus, cotyledonibus æqualibus v. inæqualibus interdum plicatis, radicula sursum incumbente.—Arbores fruticesve lactescentes. Folia alterna v. rarius opposita, integerrima dentata v. lobata, forma et venatione quam maxime varia; stipulæ gemmam terminalem involventes, caducissimæ. Receptacula sæpius gemina v. uno abortiente solitaria, ad axillas v. ad nodos defoliatos ramorum vetustiorum, interdum in ramis distinctis aphyllis conferta v. racemosa, pedunculo sæpius brevissimo apice 3-bracteato v. nudo. Bracteæ ad os receptaculi ∞-seriatæ, parvæ, exteriores sæpe erectæ umbonem terminalem efficiunt, interiores horizontales v. intra receptaculum reflexæ. Flores ♂ interdum numerosi fœmineis intermixti, sæpe tamen iis pauciores, interdum perpauci in parte superiore v. juxta os receptaculi, ♀ sæpius numerosi, receptaculum intus fere totum v. partem inferiorem obducentes. Bracteolæ inter flores ♀ sæpius parvæ v. 0, nunc inter superiores ♂ v. rarius ubique majores, flores achæniaque superantes.

Species enumeratæ v. in herbariis nostris servatæ ultra 600, per regiones calidiores utriusque orbis late dispersæ, maxima copia in Archipelago Malayano et insulis maris Pacifici vigentes, paucæ extra tropicos extensæ, imprimis in orbe vetere ubi usque ad Japoniam, et regionem Mediterraneam necnon in Africa australi inveniuntur; in America boreali Mexico excepta desunt, et in America meridionali vix lineam tropicam excedunt. *Miq. Prod. Monogr. Fic. in Hook. Lond. Journ.* vi. 514, *in vol.* vii. *continuatus*; *Afrik. Vijg. Boom. Amstelodami* 1849, *cum tabb.* 5, *et in Ann. Mus. Lugd. Bat.* iii. 260. *Walp. Ann.* i. 706, iii. 417. *Bur. in Ann. Sc. Nat. ser.* 5, xiv. 246. *Seem. Fl. Vit.* 247. *Benth. Fl. Austral.* vi. 161. *Bak. Fl. Maurit.* 283. *Kurz, For. Fl. Brit. Burm.* ii. 436. *Liebm. Urt. Mex. in R. Dansk. Vid. Selsk. Skrift. ser.* 5, ii. 319 (*Urostigma*) *et* 331 (*Pharmacosycea*).

Genus vastum et naturalissimum, in integrum servatum facillime cognoscendum, species continet habitu, florum utriusque sexus intra receptaculum dispositione, perianthio, staminum numero et stigmatis forma sat diversas, et auctores varii, imprimis Gasparrini in Nov. Gen. Fic., Neapoli, 1844, et

in Ricerche sul Caprifico e Fico in Rendic. R. Accad. Sc. Napoli, iv. (1845), et Miquel in Monographia citata, eas in plura genera distribuere tentaverant. Postea tamen ipse Miquel fateri coactus fuit 'species per genera naturalia fructificationis et habitu characteribus distincta distribuendi tentamen ad finem nunc perduci non posse, quum complurima specierum receptacula et flores nondum satis explorati sint,' et genera sua iterum conjunxit in Ann. Mus. Lugd. Bat. iii. 214 et 260 ad 300, ubi enumerationem dedit specierum 555 in subgenera seu sectiones 6 distributarum. Ex his sectionibus 4 v. 5 sequentes retinendæ videntur, etsi adhuc vix limitibus certis definiendæ sint, et genus totum monographo assiduo acriter commendamus.

1. *Urostigma.* Perianthium ♂ sæpius 3-merum. Stamen 1. Perianthium ♀ 4–6-merum. Stigma elongatum, sæpius acutum. Folia alterna, integerrima, sæpius coriacea, lævia. Receptacula sæpissime axillaria. Species in utroque orbe numerosæ. *Willd. Hort. Berol. t.* 36. *Vent. Jard. Malm. t.* 114. *Roxb. Corom. Pl. t.* 125. *Bot. Mag. t.* 2939, 3305. *Hook. Exot. Fl. t.* 223. *Wight, Ic. t.* 640, 642, 647, 653, 656 *ad* 658, 660, 662, 663, 665, 668, 671, 1967, 1989. *Bedd. Fl. Sylv. t.* 314. *Brand. For. Fl. t.* 48. *Vahl, Symb.* i. *t.* 22, 23. *Ferr. et Galin. Voy. Abyss. t.* 15. UROSTIGMA, *Gasp. Nov. Gen. Fic.* 7; *Ricerch. Caprif. e Fic. t.* 7. *Miq. in Hook. Lond. Journ.* vi. 514 *t.* 21 *ad* 23, vii. *t.* 12, 13; *Fl. Ind. Bat.* i. ii. 332, *t.* 24; *Afr. Vijg. Boom. t.* 3 *ad* 5; *et in Mart. Fl. Bras.* iv. i. 89, *t.* 27 *ad* 31. *Seem. Fl. Vit. t.* 68. *Bot. Her. Voy. t.* 35, 36. VISIANIA, *Gasp. Nov. Gen. Fic.* 9, *nomen in* MACROPHTHALMUM *mutatum in Ricerch. Caprif. e Fic.* 82. GALOGLYCHIA, *Gasp. Nov. Gen. Fic.* 10; *Ricerch. Caprif. e Fic. t.* 8.

U. sphæridiophorum. Miq. in Hook. Lond. Journ. vi. 543, delendum est. Specimen descriptum est pars folii pinnati *Simabæ trichilioidis*, St. Hil., cum receptaculis 2 *Fici* cujusdam, in eadem charta casu servatis, ut rite notavit Planchon in Herb. Hook.

2? *Pharmacosyce*, perianthio sæpius 4-mero, staminibus 2, parum ab *Urostigmate* differt. Species continet paucas, omnes Americanas, habitu omnino *Urostigmatis*. PHARMACOSYCEA, *Miq. in Hook. Lond. Journ.* vii. 64, *t.* 2, *et in Mart. Fl. Bras.* iv. i. 83, *t.* 25, 26.

Pharmacosycea guianensis, Miq. in Hook. Lond. Journ. vii. 67, quæ ab auctore in *Ficum* transfertur sub nomine *F. Parkeri* nobis a *F. radula*, Willd., non vere distincta videtur. *Pharmacosycea Parkeriana*, Miq. in Hook. Lond. Journ. vii. 71, in Enumeratione in Ann. Mus. prætermissa, nobis videtur bona species cui nomen specificum *F. Parkeriana* retinendum.

3. *Eusyce.* Perianthium ♂ sæpius 5–6-merum rarius 1–3-merum. Stamina 1, 2 v. interdum 3–6. Perianthium ♀ 4–6-merum, rarius 2-merum. Stigma breve, obliquum, peltatum v. concavum, rarius breviter rostratum. Folia variant alterna v. opposita, integerrima dentata v. lobata, sæpe scabra. Receptacula axillaria v. ad nodos defoliatos ramorum vetustiorum. Species innumeræ omnes gerontogeæ. Sectio sat naturalis at vix limitibus certis ab *Urostigmate* definita. *Miq. in Hook. Lond. Journ.* vii. *t.* 3, 6, 14, 15; *Fl. Ind. Bat.* iii. *t.* 18 *ad* 22; *Choix, Pl. Rar. Jard. Buitenz. t.* 10 *ad* 13. *Vahl, Symb.* i. *t.* 24. *Link et Otto, Ic. Pl. Rar. t.* 31. *Vriese, Pl. Nouv. Jard. Lugd. t.* 3. *Bot. Mag. t.* 3282. *Wight, Ic. t.* 632 *ad* 636, 639, 643, 646, 649 *ad* 652, 654, 655, 659, 661, 664, 666, 670, 672. *A. Rich. Fl. Abyss. t.* 80. *Ferr. et Galin. Voy. Abyss. t.* 16. *Grant in Trans. Linn. Soc.* xxix. *t.* 99. *Seem. Fl. Vit. t.* 63 *ad* 67, 69, 70. CAPRIFICUS *et* TENOREA, *Gasp. Nov. Gen. Fic.* 6; *Ricerch. Caprif. e Fic. t.* 1, 2, 7. SYCOMORUS, *Gasp. Ricerch. Caprif. e Fic.* 86. *Miq. in Hook. Lond. Journ.* vii. 109, *t.* 3, *et Afrik. Vijg. Boom. t.* 1, 2. POGONOTROPHE, *Miq. in Hook. Lond. Journ.* vii. 72, *t.* 2. *Wight, Ic. t.* 1965.

SYNŒCIA, *Miq.*, ab auctore in *Hook. Lond. Journ.* vii. 469, pro genere proprio propositum fuit, *F. diversifoliam*, Bl., et *F. falcatam*, Thunb., includente, quibus speciebus incaute tribuit flores utriusque sexus prorsus nudos mixtosque. In revisione citata in Ann. Mus. Lugd. Bat. auctor characterem prius datam omnino neglexit, et has duas species in sectiones duas distinctas separavit, *Erythrogyne*, et *Synœcia*, characteribus tamen quibus ab *Eusyce* separantur adhuc valde incertis. In *Erythrogyne*, formas plures invenimus a Miquelio sub *F. diversifolia* conjunctas, quarum nonnullæ species bene distinctas constituere videntur:—1. *F. lutescens*, Desf., est ERYTHROGYNE, *Vis. in Gasp. Ricerch. Caprif. e Fic.* 86, cujus specimen e Horto Petropolitano characteres a Visianio datos bene præbet. Folia elliptico-lanceolata apice basique angustata undique pennivenia et ima basi 3-nervia et plus minus distincte subtus 2-glandulosa. Receptacula pedunculata, ovoidea v. demum subglobosa, floribus ♂ in parte superiore ∞ longiuscule pedicellatis 2-andris, floribus ♀ in parte inferiore numerosis sessilibus, perianthii segmentis angustis discretis. Huic simillimum est specimen Javense a Miquelio receptum sub nomine *F. diversifoliæ*, Bl. 2. Specimina Miqueliana *F. diversifoliæ var. receptaculo sessili* et *subsessili*, e Java. His folia *F. lutescentis* sed receptacula longiora primum angustiora ad axillas sessilia. Hanc formam ægre distinguimus ab *F. Motleyana*, Miq., cujus verisimiliter varietas est. 3. *F. diversifolia*, Blume, e variis insulis Archipelagi varietates

plures (et forte species nonnullas) præbet quoad magnitudinem foliorum et receptaculorum et florum structura sat diversas. In omnibus folia late obovato-cuneata v. rotundata, costa media furcata v. dichotoma, glandula nigra in pagina inferiore in axilla ramorum, ut bene notavit Blume. Receptacula globosa plus minus pedunculata. In plerisque varietatibus examinatis flores ♂ in parte superiore plures sessiles v. pedicellati 2–3-andri, ♀ inferiores numerosi sessiles perianthiis omnibus e segmentis 2–3 brevibus latis crassis nigrisque; in specimine tamen in Hook. Lond. Journ. vii. t. 9 B, delineato, flores ♂ desunt, ♀ numerosi prorsus nudi, ovaria plurima perfecta, jam post anthesin aucta v. fere matura, intermixta sunt cum aliis numerosis minimis ovuliferis sed non fecundatis, quæ forte Miquel in Lond. Journ. vii. 469, pro staminibus nudis descripsit. 4. *F. retusa*, Wall. (*F. ovoidea*, Wall., *F. sideroxylifolia*, Griff. Ic. Pl. As. t. 551, f. 2). Folia anguste v. latiuscule oblonga, obtusissima, costa ut in *F. diversifolia* bifurcata, receptaculis multo minoribus globosis, floribus omnibus sessilibus v. ♂ breviter pedicellatis, cæterum fere *F. diversifoliæ*.

4. *Synœcia*, qualis pro sectione a Miquelio in Ann. Mus. Lugd. Bat. iii. 289, definitur, species paucas continet habitu inter se paullum diversas ex Archipelago Malayano. Receptacula magna, floribus numerosis utriusque sexus intermixtis, masculis monandris plerumque longe pedicellatis, fœmineis sessilibus ovario tamen intra perianthium plus minus stipitato. Perianthii segmenta utriusque sexus angusta tenuia. Stigma *Eusyces*. Huc pertinent *Synœcia falcata*, Miq. in Hook. Lond. Journ. vii. t. 11, Choix, Pl. Rar. Buitenz. t. 14, in Ann. Mus. Lugd. Bat. ad *F. punctatam*, Thunb., relata; *F. kallicarpa* (rectius *callicarpa*), Miq. in Ann. Mus. Lugd. Bat. iii. t. 10; *F. apiocarpa*, Miq.; et *F. pomiformis*, Kurz.

5. *Covellia*. Perianthii ♂ segmenta 3 v. 4, lata, sese involventia. Stamen sæpius 1. Perianthium ♀ minimum v. 0, v. demum si ovario æquilongum tenuissimum truncatum v. brevissime obtusilobum. Stigma peltatum v. obliquum. Receptacula sæpius in trunco v. in ramulis brevibus v. distinctis aphyllis. Folia ut in *Eusyce* opposita v. alterna. Sectio quoad species plerasque naturalis, nonnullæ tamen habitu *Covelliæ* in *Urostigmate* v. *Eusyce* a Miquelio collocantur. Omnes Asiaticæ sunt v. Australienses. *Roxb. Corom. Pl. t.* 123, 124. *Willd. Hort. Berol. t.* 36. *Wight, Ic. t.* 637, 638, 641, 644, 645, 648, 667, 669, 673, 1966. *Brand. For. Fl. t.* 49. *Seem. Fl. Vit. t.* 71. COVELLIA, *Gasp. Nov. Gen. Fic.* 10; *Ricerch. Caprif. e Fic. t.* 8. *Miq. in Hook. Lond. Journ.* vii. 458, *t.* 7 *ad* 9; *Fl. Ind. Bat.* i. ii. 322, *t.* 23; *et Choix, Pl. Rar. Buitenz. t.* 15. SYCOMORPHE, *Miq. in Ann. Sc. Nat. ser.* 3, i. 35. CYSTOGYNE, *Gasp. Ricerch. Caprif. e Fic.* 84, *t.* 8, species nonnullas includit perianthio ♀ tenuissimo ovario æquilongo, a *Covelliis* perianthio ♀ minimo v. 0 ab auctore distinctas.

40. **Sparattosyce,** *Bur. in Ann. Sc. Nat. ser.* 5, xi. 379, *t.* 6.—Flores dioici, in receptaculis primum ficiformibus demum ruptis explanatisque numerosi. Fl. ♂: Perianthium 3–6-partitum, segmentis imbricatis. Stamina 3–6, filamentis brevibus rectis; antheræ ovatæ. Ovarii rudimentum breve. Fl. ♀: Perianthium 6–10-partitum, segmentis imbricatis. Ovarium liberum; stylus elongatus, sublateralis, indivisus v. 2-fidus, ramis stigmatosis longe filiformibus exsertis; ovulum ex apice pendulum. Fructus perianthio persistente stipatus, exocarpio tenui, endocarpio crasso osseo. Semen sub apice affixum, testa membranacea; albumen 0; cotyledones latissimæ, reclinatæ, conduplicato-corrugatæ, inferiore exteriore interiorem et radiculam superam circumducente.—Arbores. Folia alterna, petiolata, integerrima, coriacea, pennivenia; stipulæ gemmam terminalem tegentes, caducissimæ. Receptacula ad axillas solitaria, breviter pedunculata, primum pyriformia more *Fici* foramine parvo ∞-bracteato pertusa, per anthesin in lacinias irregulares patentes v. recurvas divisa, superficie interiore bracteolis segmentisque perianthiorum lanceolatis membranaceis fuscescentibus obtecta. (*Char. fruct. ex Bureau.*)

Species 2, Novo-Caledonicæ. *Bur. in DC. Prod.* xvii. 288.

Genus tam habitu quam receptaculis junioribus *Fico* quam maxime affine, nec differre videtur nisi receptaculis demum divisis et (an constanter?) stylo. Flores dioici etiam in *Fico* observantur etsi rarius.

41. **Brosimum,** *Swartz, Prod.* 12; *Fl. Ind. Occid.* i. 15, *t.* 1. (Piratinera, *Aubl. Pl. Gui.* ii. 888, *t.* 340, *charactere falso*. Galactodendron, *H. B. et K. Nov. Gen. et Sp.* vii. 163.)—Flores monoici, receptaculo globoso androgyno affixi. Fl. ♂ numerosi, superficiem exteriorem receptaculi obtegentes: Perianthium breviter cupulatum v. a receptaculo vix distinctum. Stamen 1 (rarius 2?), filamento brevi erecto; anthera parva ovata. Ovarii

rudimentum 0. Fl. ♀ in centro receptaculi plus minus immersus solitarius (v. rarius 2 in locellis distinctis?): Perianthium 0 v. cum receptaculo omnino concretum. Ovarium receptaculo inclusum et basi adnatum, superne in stylum breviter exsertum attenuatum: ramis stigmatosis exsertis crassiusculis patentibus; ovulum ex apice pendulum. Fructus globosus, receptaculo carnoso v. plus minus exsiccato quasi corticatus; pericarpium basi cum receptaculo concretum, apice liberum etsi inclusum (v. rarius demum apice exsertum?). Semen subglobosum, apice v. sub apice lateraliter affixum, testa membranacea; albumen 0; cotyledones crassæ, carnosæ, subæquales, radicula parva supera.—Arbores lactescentes. Folia breviter petiolata, integerrima, demum coriacea, penninvenia; stipulæ laterales, parvæ, caducissimæ. Florum receptacula ad axillas sæpius gemina, pedunculis mox reflexis, v. interdum ramulis floriferis brevibus subaphyllis quasi racemosa. Bracteæ sub receptaculo parvæ arcte appressæ v. 0. Bracteolæ inter flores ♂ numerosæ, sæpissime peltatæ brevissimeque stipitatæ, superficiem totam ante anthesin obtegentes, in paucis speciebus minores v. minus conspicuæ, etiam in fructu sæpius persistentes.

Species ad 8, per Americam tropicam a Brasilia usque ad Indiam occidentalem et Mexicum dispersæ. *Tréc. in Ann. Sc. Nat. ser.* 3. viii. 139, *t.* 6. *Walp. Ann.* i. 666. *Tuss. in Journ. Bot.* i. (1808), 202, *t.* 8. *Pæpp. et Endl. Nov. Gen. et Sp. t.* 148. *Miq. in Mart. Fl. Bras.* iv. i. *t.* 32, 33.

Genus Aubletianum, pessime descriptum, ab auctoribus necessarie neglectum, nunc futile substitueretur pro Swartziano optime definito et tam diu ab omnibus botanicis recepto.

42. **Lanessania,** *Baill. Adans.* xi. 298.—Flores monoici, receptaculo carnoso anguste turbinato v. obpyramidato androgyno affixi. Fl. ♂ numerosi, apicem explanatum receptaculi obtegentes, arcte conferti, basi subconnati: Perianthium tubulosum, carnosulum, brevissime obtuseque 3–4-fidum. Stamina 2 rarius 3, filamentis inclusis rectis crassis; antheræ parvæ, loculis adnatis. Ovarii rudimentum 0 v. minute subulatum. Flos ♀ in centro receptaculi unicus. Perianthium a receptaculo carnoso haud distinctum canalem centralem efficiens. Ovarium in fundo receptaculi inferum; stylus intra canalem liber, apice exsertus, ramis stigmatosis elongatis; ovulum ex apice loculi pendulum. Fructus parvus, globosus (in speciminibus imperfectus).—Arbuscula lactescens, ramulis receptaculisque fulvo-tomentellis. Folia alterna, petiolata, integerrima, coriacea, subtus insigniter penninvenia et reticulato-venulosa; stipulæ parvæ, liberæ, caducæ. Receptacula ad axillas solitaria, pedunculo brevi patente v. reflexo. Bracteæ circa marginem receptaculi vix prominentes, fere tuberculiformes, tomentellæ, obscure 2–3-seriatæ.

Species quoad flores bene nota unica, Brasiliæ borealis incola (*Spruce n.* 1825). Huic forte addenda species quoad folia simillima, a Spruceo sub nomine *Soroceæ* n. 1635 distributa. Specimina absque floribus fructus paucos parvos imperfectos præbent.

43. **Bosqueia,** *Thou. ex Baill. Adans.* iii. 338, *t.* 10, *et* viii. 72, *t.* 4.—Flores monoici, receptaculo campanulato v. obconico androgyno affixi. Fl. ♂ receptaculi faciem interiorem obtegentes: Perianthia 0. Stamina bracteis intermixta, filamentis erectis; antheræ erectæ, ovales v. oblongæ. Flos ♀ unicus in centro receptaculi immersus: Perianthium 0 (nisi cum receptaculo concretum). Ovarium in fundo receptaculi inferum; stylus exsertus, ramis stigmatosis filiformibus; ovulum sub apice affixum, pendulum. Fructus inferus; pericarpium a receptaculo adnato urceolato v. subgloboso apice bracteolarum staminumque reliquiis coronato non distinguendum. Semen (maturum a nobis non visum) descendens, albumine carnoso copioso, embryone subapicali minimo (*Baill.*).—Arbores. Folia alterna, breviter petiolata, integerrima, coriacea, penninvenia; stipulæ intrapetiolares, caducæ. Receptacula ad axillas solitaria, sessilia v. pedunculata, margine æqualiter v. oblique bracteis brevibus involucrata.

Species 3 v. 4, Madagascariæ et Africæ tropicæ incolæ, quarum una a Welwitschio sub nomine *Centrogynis angolensis* distributa.

Genus primo intuitu *Trymatococco* similis sed stamina *Artocarpearum* nec *Morearum*. Seminum structura, si rite observata, ab omnibus *Urticaceis* abhorret albumine copioso carnoso et embryone minimo. An forte cotyledones pro albumine radicula cum plumula pro embryone descriptæ?

44. **Scyphosyce,** *Baill. Adans.* xi. 293.—Flores monoici, receptaculo tubuloso-cupulato androgyno inclusi. Fl. ♂ in fundo receptaculi ∞-seriati. Perianthium anguste tubulosum, obtuse 2–4-dentatum. Stamen 1, filamento recto; anthera oblonga, erecta, exserta. Ovarii rudimentum 0. Flos ♀ in centro receptaculi unicus: Perianthium masculis æquilongum, segmentis 2 distinctis latis uno alterum pistillumque involvente. Ovarium superum, perianthio inclusum; stylus subulatus, primum centralis, demum fere lateralis, ramis stigmatosis exsertis longiuscule filiformibus; ovulum apice oblique affixum, pendulum. Fructus junior ovoideo-globosus, receptaculi limbo deciduo denudatus, basi reliquiis florum ♂ cinctus iisque longior; maturus nobis deest.—Herba dicitur perennis, simplex, ½–1-pedalis; caulis tamen durus et in sicco lignosus videtur, basi radicans. Folia alterna, in parte superiore conferta, brevissime petiolata, oblonga, acuminata, integerrima v. denticulata, membranacea, pennivenia; stipulæ liberæ, angustæ. Receptacula parva, ad axillas pedunculata, basi carnosula florifera, parte superiore v. limbo cupulato membranaceo margine breviter 4–5-lobo.

Species 1, Africæ tropicæ occidentalis incola.

45. **Antiaris,** *Lesch. in Ann. Mus. Par.* xvi. 478, *t.* 22. (Lepurandra, *Grah. Cat. Pl. Bomb.* 193.)—Flores monoici, ♂ dense capitati, ♀ solitarii, receptaculo utriusque sexus bracteis ∞-seriatis imbricatis involucrato. Fl. ♂: Perianthium 4- rarius 3-partitum, segmentis spathulatis apice concavis imbricatis. Stamina 4, rarius 3, filamentis brevibus erectis liberis; antheræ oblongæ. Ovarii rudimentum 0. Fl. ♀: Perianthium 0 (v. cum receptaculo concretum?). Ovarium involucro inclusum et receptaculo adnatum; stylus 2-partitus, ramis subulatis exsertis recurvis superne stigmatosis; ovulum ab apice pendulum. Fructus carnosus, pericarpio cum receptaculo aucto concreto. Semen pendulum, testa crustacea v. indurata; albumen 0; embryo subglobosus, cotyledonibus crasso-carnosis æqualibus, radicula parva supera.—Arbores fruticesve lactescentes. Folia alterna, disticha, petiolata, pennivenia, integerrima v. serrata. Stipulæ laterales v. intra petiolum connatæ, parvæ, caducissimæ. Receptacula ad axillas breviter pedunculata, ♂ sæpius gemina v. pauca, plana v. convexa, ♀ solitaria.

Species 5 v. 6, Indiæ orientalis et Archipelagi Malayani incolæ. *Tréc. in Ann. Sc. Nat. ser.* 3, viii. 143, *t.* 6. *Walp. Ann.* i. 667. *Br. in Flind. Voy. t.* 5. *Benn. Pl. Jav. Rar. t.* 13. *Blum. Rumph. t.* 22, 23, 54. *Seem. Fl. Vit. t.* 72; *Bonplandia*, 1862, *t.* 7. *Hook. Comp. Bot. Mag.* i. *t.* 17. *Wight, Ic. t.* 1958. *Bedd. Fl. Sylv. t.* 307.

46. **Olmedia,** *Ruiz et Pav. Prod. Fl. Per. et Chil.* 129, *t.* 28; *Syst. Veg.* 257.—Flores dioici, ♂ dense capitati, ♀ solitarii, receptaculo utriusque sexus bracteis ∞-seriatis involucrato. Fl. ♂: Perianthium obovoideum, tenuiter membranaceum, demum valvatim 4-fidum, v. angustius 4-partitum, segmentis imbricatis. Stamina 4, filamentis ad basin segmentorum affixis liberis erectis; antheræ exsertæ, in alabastro pendulæ. Ovarii rudimentum 0 v. minutum (flores interdum 5-meri?). Fl. ♀: Perianthium basi ovoideum, demum globosum, apice foramine parvo pertusum v. in collum tenue circa stylum productum. Ovarium inclusum, rectum; stylus centralis, tenuis, ramis stigmatosis exsertis filiformibus; ovulum ab apice pendulum. Fructus perianthio membranaceo v. crassiusculo inclusus; pericarpium membranaceum. Semen globosum, testa membranacea; albumen 0; cotyledones crasso-carnosæ, æquales v. parum inæquales, radicula minima supera.—Arbores lactescentes. Folia alterna, breviter petiolata, integerrima v. remote dentata, paucivenia; stipulæ oblongæ, sericeæ, caducissimæ. Receptacula ad axillas solitaria v. gemina, in speciebus typicis sessilia, in aliis breviter pedunculata.

Species descriptæ v. in herbariis obviæ 6. Americæ australis tropicæ incolæ, nonnullæ uno sexu tantum noto adhuc dubiæ. *Tréc. in Ann. Sc. Nat. ser.* 3, viii. 127, *t.* 2. *Walp. Ann.* i. 662. *Pœpp. et Endl. Nov. Gen. et Sp. t.* 143, 144. *H. B. et K. Nov. Gen. et Sp.* vii. *t.* 633.

Characteres nostri, imprimis ab *O. aspera*, R. et Pav., deducti sunt, cujus flores utriusque sexus fructusque examinavimus, ut et ab iconibus Pœppigianis speciminibusque unius sexus aliarum specierum. *O. grandifolia*, Trec., et *O. guianensis*, Trec., a Baillonio referuntur ad *Maquiram* (*Perebeam?* v. *Helicostylem?*). *O. calophylla*, Pœpp., nobis videtur *Perebeæ* species. *O. tomentosa*,

Pœpp., a Bureau ad *Helicostylem* refertur. *O. armata*, Miq., in Seem. Bot. Her., est verisimiliter *Castilloæ* species. Pseudolmedia, *Karst. Fl. Colomb.* ii. 21, *t.* 111, a *Pseudolmedia*, Tréc., certe diversa, nobis characteres omnes *Olmediæ* ostendere videtur, exceptis floribus ♂ 5-meris, et perianthio ♀ basi ovario adnato.

47. **Pseudolmedia,** *Tréc. in Ann. Sc. Nat. ser.* 3, viii. 129, *t.* 5.—**Flores dioici, ♂ capitati, ♀ solitarii, receptaculo utriusque sexus bracteis ∞-seriatis involucrato. Fl. ♂: Perianthium 0. Stamina (flores singuli) numerosa, receptaculo intra involucrum plano v. concavo (sine ordine?) imposita, squamis lineari-spathulatis (bracteolis?) intermixta, filamentis brevibus erectis; antheræ oblongæ. Ovarii rudimentum 0. Fl. ♀: Perianthium ovoideum v. tubulosum, crassiusculum, apice foramine parvo integro v. denticulato pertusum. Ovarium inclusum, basi uno latere adnatum; stylus rigidule filiformis, ramis stigmatosis exsertis subæqualibus; ovulum ab apice pendulum. Fructus ovoideus, perianthio aucto carnosulo inclusus, et plus minus uno latere adnatus, involucro ad basin fructus immutato; pericarpium crustaceum. Semen prope apicem affixum v. (*ex Baill.*) pericarpio lateraliter longe adnatum, testa membranacea; albumen 0 v. perparcum; cotyledones crasso-carnosæ, valde inæquales, radicula parva supera.—Arbores fruticesve (haud lactescentes?). Folia alterna, breviter petiolata, integerrima, tenuiter coriacea, nitidula, penninervia; stipulæ intrapetiolares, parvæ, caducissimæ. Capitula ♂ et flores ♀ ad axillas sessilia, solitaria v. gemina. Involucri bracteæ utriusque sexus pluriseriatim imbricatæ, in femineis tamen pauciores et sub fructu parvæ. Fructus in una saltem specie ruber dicitur et edulis.**

Species 4 v. 5, Americæ tropicæ Andinæ et centralis et Indiæ occidentalis incolæ. *Walp. Ann.* i. 663. *Griseb. Fl. Brit. W. Ind.* 152.

Olmediopsis, *Karst. Fl. Colomb.* ii. 17, *t.* 109, ex icone et charactere dato, a *Pseudolmedia*, Tréc., non Karst., non rite distinguitur. Genus cæterum quoad flores masculos *Castilloam* refert, femineis tamen ut in *Olmedia* solitariis.

48. **Castilloa,** *Cervant. in Gaz. Litt. Mexico*, 1794, *ex Tréc. in Ann. Sc. Nat. ser.* 3, viii. 136, *t.* 5.—Flores monoici, utriusque sexus dense capitati, receptaculis unisexualibus planis aut concavis bracteis pluriseriatis involucratis. Fl. ♂: Perianthium 0. Stamina (flores singuli?) in receptaculo numerosa, conferta, bracteolis intermixtis, filamentis rectis; antheræ ovatæ. Ovarii rudimentum 0. Fl. ♀: Perianthium ovoideum, 4-lobum, lobis crassis arcte contiguis vix imbricatis. Ovarium inclusum, hinc perianthio adnatum; stylus brevis, ramis stigmatosis exsertis filiformibus v. lanceolatis patentibus; ovulum sub apice affixum, pendulum. Perianthia fructifera aucta, tenuiter succulenta v. crasso-carnosa, receptaculo insidentia nec concreta, achænia includentia; pericarpium crustaceum. Semen pendulum, testa membranacea; albumen 0; cotyledones crasso-carnosæ, æquales, radicula parva infera.—Arbores lactescentes. Folia alterna, brevissime petiolata, sæpius ampla, integerrima v. dentata, penninervia; stipulæ in unam intrapetiolarem amplam deciduam connatæ. Receptacula ♂ ad axillas v. ad nodos defoliatos sæpius plura, pedicellata; ♀ solitaria, sessilia v. brevissime pedicellata.

Species 2 v. 3, Americæ centralis et ins. Cubæ incolæ. *Walp. Ann.* i. 665. *Collins, Rep. Caoutch. Comm.* 1872, *t.* 2, 3.

Genus quoad flores ♀ et fructus *Perebeæ* valde affine et forte *C. Markhamiana*, Coll., cujus fl. ♂ ignoti, ad illam referenda erit. Flores ♂ *C. elasticæ*, Cerv., fere *Pseudolmediæ*, ab illis *Perebeæ* (si hi rite determinati) longe differunt.

49. **Helicostylis,** *Tréc. in Ann. Sc. Nat. ser.* 3, viii. 134, *t.* 5.—Flores dioici, utriusque sexus globoso-capitati, capitulis bracteis ∞-seriatim imbricatis involucratis. Fl. ♂: Perianthium 4-partitum, segmentis crassiusculis concavis imbricatis. Stamina 4, filamentis erectis; antheræ exsertæ, ovatæ, connectivo latiusculo. Ovarii rudimentum 0. Fl. ♀: Perianthium basi receptaculo semi-immersum concretumque, limbo 4-partito, segmentis crassis carnosis leviter 2-seriatim imbricatis arcte conniventibus. Ovarium inclusum et uno latere plus minus adnatum; stylus tenuis, terminalis v. demum lateralis, ramis stigmatosis filiformibus sæpe tortis; ovulum ab apice pendulum. Perianthia fructifera

in syncarpium irregulariter globosum carnosum ∞-locellatum arcte conferta et plus minus concreta. Achænia in locellis clausis uno latere adnata, ovata ; pericarpium crustaceum. Semen conforme, superne lateraliter affixum, testa membranacea ; albumen 0 ; cotyledones crasso-carnosæ, æquales, radicula brevi supera.—Arbores excelsæ (an lactescentes ?). Folia alterna, breviter petiolata, integerrima, coriacea, pennivenia ; stipulæ intrapetiolares, distinctæ, caducissimæ. Capitula ♂ ad axillas sæpius plura, pedunculata, ♀ solitaria sessilia. Bracteolæ intra capitula ♂ sub floribus segmentis perianthii similes, in capitulis ♀ a perianthiis carnosis haud distinguendæ.

Species 2 ? Americæ Amazonicæ v. Guianensis incolæ. *Walp. Ann.* i. 664. *Pœpp. et Endl. Nov. Gen. et Sp.* ii. *t.* 145 (*Olmedia*).

Maquira, *Aubl. Pl. Gui. Suppl.* 36, *t.* 389, arbor Guianensis floribus ob statum juvenilem indescriptis, ex icone speciminibus Guianensibus *Helicostylis Pœppigianæ*, Tréc., bene convenit sed genus Aubletianum valde incertum remanet et nomen delendum. Bureau in DC. Prod. xvii. 286, *Perebeam laurifoliam*, Tréc., ad *Maquiram* refert, sed folia basi valde inæquilatera cum icone haud conveniunt.

50. **Perebea,** *Aubl. Pl. Gui.* ii. 952, *t.* 361.—Flores dioici, utriusque sexus in receptaculo concavo demum plano convexo v. subgloboso bracteis ∞-seriatim imbricatis involucrato conferti. Fl. ♂ : Perianthium 4-partitum, segmentis crassis 2-seriatim imbricatis. Stamina 4, filamentis brevibus erectis ; antheræ ovatæ. Ovarii rudimentum 0. Fl. ♀ : Perianthium tubulosum, apice 4-dentatum. Ovarium perianthio alte v. undique adnatum ; stylus terminalis, crassus, ramis stigmatosis brevibus ; ovulum sub apice affixum, pendulum. Perianthia fructifera carnosa, in capitulo involucrato arcte conferta at distincta ; pericarpium . . . Semen . . .—Arbores lactescentes. Folia alterna, breviter petiolata, integerrima, coriacea, pennivenia ; stipulæ parvæ v. mediocres semet amplectentes, caducissimæ. Capitula ♂ ad axillas breviter pedunculata, solitaria v. 2–3-na, bracteis involucrantibus flores non superantibus ; capitula ♀ solitaria, sessilia.

Species 4 v. 5, Americæ tropicæ incolæ si omnes huc rite relatæ. *Tréc. in Ann. Sc. Nat. ser.* 3, viii. 133, *t.* 5. *Walp. Ann.* i. 664. *Pœpp. et Endl. Nov. Gen. et Sp.* ii. *t.* 146 (*Olmedia?*). *Karst. Fl. Colomb.* ii. *t.* 112.

Genus adhuc imperfecte notum, a *Helicostyle* differre videtur ovario evidentius infero et styli ramis abbreviatis. Speciem typicam Aubletii non vidimus, character supra datus imprimis e descriptionibus iconibusque citatis redactus, et e speciminibus *P. laurifoliæ*, Tréc. Hæc a Bureau ad *Maquiram*, Aubl., refertur, sed iconi male respondet, imprimis ob folia basi insigniter inæquilatera. Vix tamen dubitamus hæc genera melius nota in unum conjungenda erint sub nomine Aubletiano. Characteres e forma stigmatum sumpti non magis valoris hic videntur quam in *Ficu*, *Cudrania*, *Celtide*, *Crotone*, *Euphorbia*, aliisque generibus naturalissimis *Urticacearum* et *Euphorbiacearum*.

51. **Noyera,** *Tréc. in Ann. Sc. Nat. ser.* 3, viii. 135, *t.* 5.—Flores dioici ?, ♂ ignoti, ♀ globoso-capitati, capitulo bracteis ∞-seriatim imbricatis involucrato. Perianthium carnosum, ovoideum v. tubulosum, foramine parvo pertusum, v. 4–6-dentatum, v. 4–6-partitum. Ovarium inferum, receptaculo carnoso immersum adnatumque ; stylus exsertus, ramis stigmatosis filiformibus v. crassiusculis ; ovulum sub apice affixum, pendulum. Perianthia fructifera superne aucta, carnosa, supra receptaculum carnosum distincta. Achænia locellis receptaculi inclusa et ei subconnata ; pericarpium chartaceum. Semen conforme, testa membranacea ; albumen 0 ; cotyledones crasso-carnosæ, subæquales, radicula brevissima.—Arbores lactescentes. Folia alterna, breviter petiolata, integerrima, coriacea, pennivenia ; stipulæ semet amplectentes, caducissimæ, cicatricem annularem relinquentes. Capitula ♀ ad axillas solitaria, sessilia.

Species 3, Guianæ v. Brasiliæ borealis incolæ, omnes adhuc imperfecte notæ in genera totidem distincta ab auctoribus distributæ. 1. Noyera, *Tréc. l. c. Walp. Ann.* i. 664, perianthio ♀ apice foramine parvo integro pertuso. 2. Naucleopsis, *Miq. in Mart. Fl. Bras.* iv. i. 120, *t.* 35, perianthio ♀ apice 4–6-dentato. 3. Oncodeia (male *Ogcodeia* nam γκ semper latine *nc* redditur), *Bur. in*

DC. Prod. xvii. 282, perianthio ☿ usque ad basin limbi in segmenta 4–6 angusta crassa (perianthia abortiva, *Bur.*) diviso. Characteres tamen levioris momentus ad genera separanda haud sufficere videntur, dum flores ♂ ignoti remanent. Genus in integrum a *Perebea* paullulum differt ovario fructuque in receptaculo immersis.

52. **Helianthostylis,** *Baill. Adans.* xi. 299.—Flores dioici, ♂ globoso-capitati, bracteis intermixti, receptaculum undique obtegentes; ♀ solitarii. Fl. ♂: Perianthium membranaceum, anguste obconico-tubulosum, apice breviter lateque 4–5-lobum. Stamina 4–5, filamentis rectis demum exsertis; antheræ ovatæ. Ovarii rudimentum lineare, hirtellum, in stylum demum longissime filiformem productum. Fl. ♀: Perianthium? globosum, carnosulum, ovarium includens eique fere undique arcte adnatum nisi summo apice brevissime solutum, ore parvo. Ovarium inclusum vix a perianthio solvendum; stylus brevissime exsertus, ramis stigmatosis tenuibus rigidulis; ovulum apice lateraliter affixum, pendulum. Fructus globosus, strato exteriore (an perianthium persistens potius quam exocarpium?) carnosulo, interiore (pericarpium verum? v. endocarpium?) chartaceo v. fere cartilagineo ægre solubili, in fructu maturo pericarpium totum exsiccatum, fragile. Semen pendulum, subglobosum, testa membranacea; albumen 0; embryo rectus, cotyledonibus crasso-carnosis æqualibus, radicula brevi supera.—Arbuscula, ramis tenuibus, novellis tomentellis mox glabratis. Folia alterna, brevissime petiolata, acuminata, integerrima, demum tenuiter coriacea, subtus prominule pennivenia et reticulato-venulosa; stipulæ parvæ, laterales, caducissimæ. Inflorescentiæ utriusque sexus ad axillas solitariæ, sessiles. Capitula ♂ stricte globosa, stylis effœtis undique longissime exsertis insignia. Bracteolæ intra capitulum sub floribus tenuiter setaceæ, apice spathulato-dilatatæ v. peltatæ, at parum conspicuæ. Florum ♀ perianthium extus breviter densissimeque hirsutum. Fructus extus scaber.

Species 1, Brasiliæ borealis incola, *Spruce n.* 2097, 2219, 2242, 3775.

53. **Cudrania,** *Tréc. in Ann. Sc. Nat. ser.* 3, viii. 122, *t.* 3. (Cudranus, *Miq. Fl. Ind. Bat.* i. ii. 290.)—Flores dioici, utriusque sexus globoso-capitati, capitulo exinvolucrato. Fl. ♂: Perianthium 4-partitum, segmentis oblongis obtusis concavis bracteis 2–4 cinctis. Stamina 4, filamentis filiformibus v. crasso-carnosis perianthii segmentis plus minus adnatis; antheræ erectæ, breviter exsertæ. Ovarii rudimentum subulatum v. 0. Fl. ♀: Perianthii segmenta quam in mare latiora, magis imbricata, ovarium arcte cingentia. Stylus indivisus v. æqualiter v. inæqualiter 2-partitus, ramis stigmatosis elongato-filiformibus v. crassis patentissimisque; ovulum ex apice pendulum. Perianthia fructifera cum bracteis aucta, carnosula, in pseudosyncarpium globosum densissime conferta; pericarpium inclusum, ovatum, compressum, crustaceum. Semen conforme, testa membranacea; albumen tenuiter carnosum; embryo plicatus, cotyledonibus latis varie contortuplicatis, æqualibus v. inæqualibus, radiculam longam ascendentem amplectentibus.—Frutices ramosissimi v. scandentes interdum arbusculæ, inflorescentia excepta glabri, spinis axillaribus rectis v. recurvis sæpius armati. Folia alterna, breviter petiolata, integerrima, pennivenia; stipulæ parvæ, laterales. Capitula ad axillas breviter pedunculata, florifera pisiformia, fructifera colorata usque ad pollicem diametro. Bracteolæ intra capitula utriusque sexus sub quoque flore plures.

Species 2 v. 3, Asiæ tropicæ a Zeylania et Peninsula usque ad Archipelagum Malayanum, Chinam et Japoniam necnon Australiæ tropicæ et Novæ Caledoniæ incolæ. *Walp. Ann.* i. 661. *Bur. in Ann. Sc. Nat. ser.* 5, xi. 377. *Wight, Ic. t.* 1960.

Genus habitu *Plecospermo* simillimum, et cum eo in herbariis sæpe confusum, staminibus facile dignoscendum. Species imprimis stylis inter se distinctæ, aliis characteribus ulterius definiendæ. *Cudraniæ* species tinctoria Africana, a Kirkio in Journ. Linn. Soc. ix. 229 memorata, est *Cardiogyne*, Bur., quam ad *Plecospermum* inter *Moreas* referimus.

54. **Trecullia,** *Dcne.*; *Tréc. in Ann. Sc. Nat. ser.* 3, viii. 108, *t.* 3.—Flores dioici, utriusque sexus capitati, cum bracteolis receptaculum carnosum densissime obtegentes, capitulo bracteis paucis stipato. Fl. ♂: Perianthium tubulosum, membranaceum, apice 2–4-

(sæpius 3-) fidum v. dentatum, basi incrassatum. Stamina 2–4, sæpius 3, filamentis erectis crassis inæqualibus; antheræ oblongæ v. ovatæ, erectæ, exsertæ. Ovarii rudimentum 0 v. minutum. Fl. ♀: Perianthium 0 nisi cum bracteis concretum (rarius ex Trécul e foliolis 3 elongatis apice ciliato-fimbriatis). Ovarium ovatum, bractea v. receptaculo inclusum; stylus subulatus, ramis stigmatosis exsertis filiformibus v. rigidulis; ovulum ex apice pendulum. Bracteæ fructiferæ (cum perianthiis?) in syncarpium globosum bractearum lobis echinatum densissime confertæ v. cum receptaculo carnoso concretæ, locellos 1–∞-seriatos in medio syncarpio formantes. Achænia in quoque locello solitaria; pericarpium rigidule membranaceum. Semen ovoideum v. globosum, testa membranacea; albumen 0; embryo conformis, cotyledone altera carnosa reduplicata alteram angustam v. tenuem includente, radicula brevissima supera.—Arbores fruticesve glabri. Folia alterna, breviter petiolata, integerrima, coriacea, pennivenia; stipulæ lanceolatæ, parvulæ, caducæ. Capitula ad axillas v. nodos defoliatos sessilia v. breviter pedunculata. Bracteæ sub capitulo paucæ, parvæ, sub-2-seriatæ, involucrum verum haud formantes; bracteæ seu bracteolæ intra capitulum flores subtendentes, apice in ramulos ∞ clavatos v. apice peltatos divisæ, ramulo uno exteriore cæteris majore, v. in capitulo ♀ ramuli omnes subæquales.

Species 2 v. 3, Africæ tropicæ incolæ. *Walp. Ann.* i. 658. Species typica est arbor ingens, foliis magnis, syncarpio v. pseudosyncarpio fructifero pedem diametro, locellis fructiferis in interiore usque ad mille irregulariter ∞-seriatis. Bracteæ locellos formantes haud concretæ sed arctissime confertæ subcohærentes circa fructus membranaceo-dilatatæ subfibrosæ, ramis terminalibus tenuibus apice peltatis circumferentiam syncarpii æqualiter attingentibus. In capitulis floridis utriusque sexus bracteæ pariter densissimæ, antheris oblongis in mare, styli ramis divaricatis in fœmineo solis prominentibus. *Bot. Mag. t.* 5986.

T. acuminata, Baill. Adans. xi. 292, ab auctore pro sectione v. genere proprio *Pseudotreculia* proponitur. Arbor est multo minor, foliis oblongis. Capitula multo minora, bracteis sub floribus non peltatis una majore ovata crassa cæteris pluribus multo minoribus. Antheræ ovatæ. Capitula fructifera globosa, pollicem diametro non attingentia. Bractearum basis cum (perianthiis? et) receptaculo in massam carnosam concretæ locellos uniseriatos perfecte clausos excepto foramine circa stylum minuto formantes. Fructus parvi, subglobosi. Semen unicum examinavimus, cotyledone majore potius utriculosa quam simpliciter reduplicata, sed forte vix in hoc semine perfecta.

Speciei evidenter tertiæ specimina adsunt a Mannio et G. Thomson in 'Old Calabar' lecta, *T. acuminatæ* subsimilia, sed capitula ♂ quæ sola adsunt ovoideo-oblonga; vix tamen iis *T. acuminatæ* majora. Frutex dicitur nec arbor. Hæ duæ species melius notæ forte pro genere distincto hinc *Treculiæ* hinc *Artocarpo* affini habendæ.

55. **Parartocarpus**, *Baill. Adans.* xi. 294.—Flores dioici, utriusque sexus globoso-capitati, bracteis creberrimis peltatis intermixti, receptaculum undique obtegentes. Fl. ♂: Perianthium 0. Stamina sigillatim inter bracteas conferta diuque occultata, filamentis erectis brevibus crassis demum parum elongatis; antheræ ovatæ. Fl. ♀ (in una specie): Perianthium tubuloso-clavatum, superne incrassatum, foramine parvo dentato pertusum. Ovarium inclusum, liberum; stylus brevis, ramis stigmatosis exsertis brevibus recurvo-patentibus æqualibus; ovulum ab apice pendulum. Fructus . . .—Arbores v. frutices? Folia alterna, petiolata, acuminata, integerrima, chartacea, pennivenia; stipulæ parvæ, caducissimæ. Capitula utriusque sexus ad axillas v. supra axillas solitaria, pedunculo brevissimo cano-puberulo.

Species 2, in collectione Borneensi Beccariana congeneres videntur, alterius n. 2257, *P. Beccariana*, Baill., specimina ♂ sola adsunt, capitulis aliis perfectis 3–4 lin., aliis ab insecto deformatis ½ poll. diametro, basi 3-bracteatis, bracteolis intra capitulum creberrimis obtuse clavato-peltatis, stamina diu occultantibus. Speciei alterius, n. 667, specimina utriusque sexus adsunt. Folia iis *P. Beccarianæ* simillima. Capitula ♂ pisiformia, bracteis baseos fere obsoletis, bracteolis latius tenuiusque peltatis, antheris minimis e bracteolis intra capitulum demum prominulis. Capitula ♀ juniora masculis similia, bracteolis creberrimis peltatis alabastra occultantibus; per anthesin perianthia apice cano-puberula e bracteolis distincte prominentia, a basi libera.

56. **Artocarpus,** *Forst. Char. Gen.* 101, *t.* 51. (Radermachia, *Thunb. in Handl. Akad. Stockh.* 1776, 252. Polyphema, *Lour. Fl. Coch.* 546. Sitodium, *Gærtn. Fruct.* i. 344, *t.* 71, 72. Rima, *Sonner. Voy. Nouv. Guin.* 99, *t.* 57 *ad* 60.)—Flores monoici, in capitula unisexualia globosa v. oblonga densissime conferti, receptaculum carnosum undique obtegentes, involucro nullo. Fl. ♂: Perianthium 2–4-lobum v. partitum, lobis segmentisve apice concavis obtusis leviter imbricatis. Stamen 1, filamento erecto sæpius complanato; anthera breviter exserta. Ovarii rudimentum 0. Fl. ♀: Perianthium tubulosum, obovoideum oblongum v. lineare, obtusum v. umbonatum, basi receptaculo carnoso immersum concretumque, apice liberum, foramine minuto interdum 3–4-dentato pertusum. Ovarium rectum, inclusum, receptaculo sepultum sed ab eo liberum; stylus centralis v. plus minus lateralis, apice stigmatoso exserto lineari spathulato rarius subpeltato rarissime 2–3-fido; ovulum sub apice affixum, pendulum. Perianthia fructifera numerosissima v. rarius pauca, cum receptaculo carnoso in syncarpium apicibus liberis parum auctis echinatum v. areolatum alte connata. Achænia syncarpio inclusa; pericarpium membranaceum v. coriaceum. Semen conforme, pendulum, testa membranacea; albumen 0; embryo rectus v. incurvus, cotyledonibus crasso-carnosis æqualibus v. valde inæqualibus, radicula brevissima supera.—Arbores lactescentes. Folia alterna, ampla, coriacea, penninervia, integerrima v. pinnatim pauciloba, rarius pinnatim ∞-foliolata; stipulæ laterales, cæterum variæ. Pedunculi axillares, solitarii, brevissimi v. longiusculi. Flores parvi, numerosissimi, receptaculum sæpius carnosum breve v. elongatum undique obtegentes. Syncarpia parva mediocria v. maxima, fructibus sæpe paucis perfectis prope centrum syncarpii immersis, perianthiis tamen omnibus tam sterilibus quam fertilibus apice sæpius æqualiter auctis, nunc obtusissimis v. umbonatis mutua pressione angulatis syncarpium extus areolatum v. perfecte continuum formantibus, nunc lineari-elongatis syncarpium echinatum efficientibus. Achænia intra perianthia v. locellos syncarpii libera.

Species descriptæ v. indicatæ ultra 40, Asiæ tropicæ a Zeylania et Archipelago Malayano usque ad Chinam incolæ, quarum duæ in regionibus tropicis imprimis in insulis maris Pacifici jam diu cultæ. *Tréc. in Ann. Sc. Nat. ser.* 3, viii. 110, *t.* 4. *Walp. Ann.* i. 659. *Miq. Fl. Ind. Bat.* i. ii. 284. *Suppl.* 417. *Baill. Adans.* iv. 79, *t.* 6. *Wight, Ic. t.* 678 *ad* 682, 1957. *Bedd. Fl. Sylv. t.* 308, 309. *Bot. Mag. t.* 2833, 2834, 2869 *ad* 2871.

Species in herbariis nostris ob specimina imperfecta valde confusa et non sine labore assiduo bene ordinandæ. Trécul sectiones 2 proposuit: 1. *Jaca.* Stipulæ magnæ, altera alteram marginibus tegente. Perianthium ♂ 2-partitum. 2. *Pseudojaca.* Stipulæ minimæ, intrapetiolares v. laterales. Perianthium ♂ 4- rarius 3-partitum. Huc referenda Wight, Ic. t. 681, icones cæteræ supra citatæ omnes ad *Jacam.*

Genus ab auctoribus Linnæo tribuitur, nunquam tamen a Linnæo patre editum fuit, sed a Linnæo filio in Supplemento suo post Forsterum sub n. 1246 receptum.

57. **Batocarpus,** *Karst. Fl. Columb.* ii. 67, *t.* 134.—Flores dioici, ♂ ignoti, ♀ capitati, involucro 0 (v. e bracteis paucis parvis?). Fl. ♀: Perianthium carnosum, apice truncatum, foramine minuto pertusum. Ovarium inclusum, liberum; stylus brevis, ramis stigmatosis exsertis brevibus patentibus; ovulum sub apice affixum, pendulum. Fructus ovoideus, perianthio aucto crasso carnoso truncato inclusus; pericarpium pergameneum. Semen conforme, testa membranacea; albumen 0; embryo rectus, cotyledonibus crasso-carnosis æqualibus, radicula minima supera.—Arbor (lactescens?) partibus novellis tomentoso-pilosulis. Folia alterna, breviter petiolata, ample oblonga, acuminata, integerrima, papyracea, penninervia et reticulato-venulosa; stipulæ lineari-lanceolatæ (liberæ?). Capitula ♀ globosa, ad axillas solitaria, breviter pedunculata, floribus arcte confertis, bracteis parvis interstinctis; fructifera in pseudosyncarpia globosa aucta, perianthiis crasso-carnosis cum receptaculo carnoso continuis arcte confertis et mutua pressione angulatis at non concretis. (*Char. ex ic. et descr. Karst.*)

Species 1, Columbiana, a nobis non visa. Genus evidenter *Sahagunia* valde affine, sed bene distinctum videtur fructibus in pseudosyncarpium arcte confertis nec supra receptaculum parvum discretis. Flore tamen ♂ ignoto quodammodo incertum remanet.

58. **Sahagunia**, *Liebm. in R. Dansk. Vid. Selsk. Skrift. ser.* 5, ii. 316. (Acanthinophyllum, *Fr. Allem. in Palestr. Scient. Rio Jan.* 1858, 215, *cum ic.*)—Flores dioici, ♂ tenuiter densissimeque cylindraceo-spicati, ♀ capitati. Fl. ♂: Perianthium 0. Stamina in spica numerosissima, sigillatim inter bracteas crebre longitudinaliter ∞-seriatas affixa, filamentis rectis v. flexuosis ; antheræ e bracteis exsertæ, parvæ, ovatæ. Ovarii rudimentum 0. Fl. ♀ : Perianthium ovoideum, crassum, apice foramine minuto subdentato pertusum. Ovarium inclusum, liberum ; stylus brevis, ramis stigmatosis exsertis brevibus patentibus ; ovulum apice v. sub apice affixum, pendulum. Fructus ovoideo-globosus, perianthio aucto tenuiter carnosulo inclusus ; pericarpium membranaceum. Semen conforme, testa membranacea ; albumen 0 ; embryo rectus, cotyledonibus crasso-carnosis æqualibus, radicula minima supera.—Arbores lactescentes. Folia alterna, breviter petiolata, oblonga v. ampla, acuminata, integerrima v. spinuloso-dentata, membranacea v. tenuiter coriacea, subtus prominule pennivenia et reticulato-venulosa ; stipulæ minimæ, rigide setiformes v. inconspicuæ. Inflorescentiæ ad axillas breviter pedunculatæ. Spicæ ♂ in pedunculo sæpius plures, tenues, rhachi tamen staminibus bracteisque undique densissime obtecta. Capitula ♀ in axillis sæpius solitaria, subglobosa, perianthiis fructiferis in receptaculo parvo prominentibus.

Species 3, una Mexicana, duæ Brasiliæ et Guianæ incolæ, quarum unam ineditam ad flum. Casiquiare legit *Spruce n.* 3279, in Cayenne *Sagot n.* 530, et ad Cantagallo Brasiliæ *Peckolt*, alterius ab Allemão bene descriptæ et delineatæ specimina ♂ vidimus e vicinibus Rio Janeiro *Sello*, et e Cayenne *Martin*. Huic quoad folia simillima est *Sorocea Klotzschiana*, Baill., quæ tamen flores et fructus *Soroceæ* nec *Sahaguniæ* ostendit.

59. **Clarisia**, *Ruiz et Pav. Prod. Fl. Per. et Chil.* 158, *t.* 28 ; *Syst. Veg.* 255. (Soaresia, *Fr. Allem. in Palestr. Scient. Rio Jan.* 1858, 142, *cum ic.*)—Flores dioici, ♂ tenuiter densissimeque cylindraceo-spicati, ♀ ramosi. Fl. ♂ : Perianthium 0. Stamina in spica numerosissima, sigillatim inter bracteas minutas apice peltatas affixa, filamentis erectis brevibus ; antheræ ovatæ. Ovarii rudimentum 0. Fl. ♀ : Perianthium ovoideum, crassum, ovario alte adnatum, supra ovarium connivens, foramine parvo fimbriato pertusum (a Ruiz et Pav. prætervisum). Ovarium inferum ; stylus brevis, crassus, ramis stigmatosis linearibus inæqualibus ; ovulum ab apice pendulum. Fructus ovoideus, carnosus, perianthio persistente cum pericarpio concreto, endocarpio membranaceo. Semen subglobosum, testa membranacea ; albumen 0 ; embryo rectus, cotyledonibus crasso-carnosis æqualibus, radicula brevissima supera.—Arbores excelsæ, lactescentes. Folia alterna, petiolata, integerrima, pennivenia ; stipulæ squamiformes, fugaces. Spicæ ♂ geminæ, paribus secus rhachin ramuli floriferi brevis aphylli dissitis subsessilibus. Rhachis spicæ (seu receptaculum lineare) uno latere anguste denudata, cæterum undique bracteolis staminibusque dense obtecta. Flores ♀ in racemo brevi sub quaque bractea gemini, singuli pedicellati, pedicello apice 4-bracteato (bracteis a Ruiz et Pav. pro perianthio descriptis). (*Char. ex descr. et ic. citat.*)

Species 4? quarum 2 Peruvianæ a R. et Pav. indicatæ, 1 Brasiliana ab Allemão descripta. Harum specimina non vidimus et inter se comparare nequimus, sed ex descriptione iconibusque species sunt evidenter congeneres, habitu et floribus ♂ *Sahaguniæ* affines, sed inflorescentia floribusque ♀ bene distinctæ, et nuper a Glaziovii accepimus sub n. 9590 nomineque *Soaresiæ ilicifoliæ* speciei quartæ Brasilianæ specimen fructiferum foliis ut in *Sahagunia* (*Acanthinophyllo*) *strepitante*, Allem., et *Sorocea Klotzschiana*, Baill., margine spinoso-dentatis sed rigidius coriaceis, fructu omnino ut in ic. cit. *Soaresiæ* delineato.

60. **Balanostreblus**, *Kurz in Journ. Asiat. Soc. Beng.* xlii. 247, *t.* 19 ; *For. Fl. Burm.* ii. 465.—Flores monoici (v. dioici ?), ♂ tenuiter densissimeque cylindraceo-spicati, ♀ racemosi. Fl. ♂ : Perianthium 4-partitum, segmentis crassiusculis obtusis subvalvatis. Stamina 4, filamentis in alabastro erectis ; antheræ ovatæ. Ovarii rudimentum 0. Fl. ♀ (a nobis non visi) : Perianthium ovarium includens basique adnatum, sursum liberum, apice perforatum. Ovarium semisuperum, inclusum ; stylus brevis, ramis stigmatosis exsertis brevibus crassis villosulis ; ovulum ab apice pendulum. Drupa pisiformis, perianthio carnoso inclusa. Semen . . . —Arbor lactescens, subglabra, rarius spinis axil-

laribus armata. Folia alterna, brevissime petiolata, plus minus spinoso-dentata, rigidula, pennivenia; stipulæ parvæ (convolutæ ?), caducissimæ. Spicæ ♂, non nisi statu juvenili observatæ, tenues, uno latere longitudinaliter sulcatæ et nudæ, bractearum serie duplici sulcam utrinque marginante, rhachi (seu receptaculo lineari) cæterum floribus parvis undique densissime obtecta. Flores ♀ secus rhachin racemi dissiti, ebracteati, pedicellis brevibus crassis fulti. (*Char. fl. ♀ et fr. ex descr. et ic. citat.*)

Species 1, Indiæ orientalis provinciarum orientalium incola.

61. **Sorocea**, *A. de St. Hil. in Mém. Mus. Par.* vii. 473.—Flores dioici, utriusque sexus racemosi v. interrupte spicati. Fl. ♂: Perianthium 4-partitum, segmentis latis imbricatis. Stamina 4, filamentis liberis erectis demum exsertis; antheræ ovatæ. Ovarii rudimentum 0. Fl. ♀: Perianthium ovoideum v. tubulosum, basi ovario adnatum, apice foramine parvo pertusum. Ovarium inferum; stylus basi inclusus crasso-carnosus ovoideo-conicus, apice breviter attenuatus, ramis stigmatosis exsertis brevibus patentibus; ovulum apice v. juxta apicem affixum, pendulum. Fructus perianthio aucto carnoso v. succulento omnino inclusus, eique basi concretus; pericarpii pars libera tenuis. Semen pendulum, testa membranacea; albumen 0; embryo curvus, cotyledone altera maxima crasso-carnosa, uno latere plicata, et intra plicam cotyledonem alteram minorem v. parvam cum radicula fovente.—Arbusculæ v. frutices lactescentes. Folia alterna, breviter petiolata, rigide membranacea v. tenuiter coriacea, integerrima spinuloso-dentata v. irregulariter pinnatifida, pennivenia, venis primariis reteque venularum subtus v. utrinque prominentibus; stipulæ parvæ, caducæ. Racemi ad axillas solitarii v. gemini. Flores utriusque sexus secus rhachin plus minus dissiti, sessiles v. pedicellati. Fructus sæpe et interdum racemus totus sub fructu ruber.

Species ad 12, Americæ tropicæ a Brasilia australi usque ad Mexicum incolæ. *Tréc. in Ann. Sc. Nat. ser.* 3, viii. 145. *t.* 6. *Miq. in Mart. Fl. Bras.* iv. i. 111, *t.* 34. *Gaudich. Voy. Bonite, t.* 71 *ad* 74. *Baill. Adans.* i. 212, *t.* 6.

In speciebus typicis 3 v. 4 flores utriusque sexus pedicellati. PSEUDOSOROCEA, *Baill. Adans.* xi. 296, species continet 8, inclusa *S. muriculata*, Miq., quas auctor pro sectione v. genere distincto proposuit. Parum tamen distinctæ videntur nisi floribus in utroque sexu secus rhachin sessilibus, masculis in una specie rhachi arcte adnatis segmentis inter se discretis. Fructus ubi notus in *Pseudosorocea* globosus, minor quam in speciebus typicis.

TRIBUS VI. CONOCEPHALEÆ.

62. **Cecropia**, *Linn. Gen. n.* 1099.—Flores dioici, densissime cylindraceo-spicati. Fl. ♂: Perianthium tubulosum v. campanulatum, integrum 2-fidum v. 2-partitum. Stamina 2, filamentis rectis vix exsertis, antheræ majusculæ. Ovarii rudimentum 0. Fl. ♀: Perianthium tenuiter membranaceum, vertice crassius, foramine parvo pertusum. Ovarium inclusum, rectum; stylus brevissimus, stigmate exserto penicillato; ovulum erectum, orthotropum. Fructus oblongus, perianthio tenuissimo inclusus; exocarpium tenuissimum evanidum; endocarpium crustaceum v. duriusculum. Semen conforme, testa membranacea; albumen 0; cotyledones oblongæ v. ovatæ, æquales, rectæ; radicula parva, supera.—Arbores lactescentes. Folia alterna, longe petiolata, ampla, circumscriptione suborbiculata, peltata, in lobos segmenta v. foliola 7–13, sæpius 9 v. 11, radiatim divisa, segmentis prominenter penniveniis subtus niveis v. utrinque virentibus; stipulæ magnæ, in unam intrapetiolarem connatæ, per evolutionem gemmam terminalem includentes, mox deciduæ. Spicæ cylindraceæ, plures (2–60), ad apicem pedunculi intra bracteam spathaceam caducam sessiles v. pedunculatæ, ♀ crassæ, ♂ tenuiores, floribus utriusque sexus minimis numerosissimis circa rhachin sæpe carnosam arcte confertis sessilibus. Pedunculi communes ad axillas solitarii v. gemini.

Species enumeratæ fere 40, Americæ tropicæ a Brasilia usque ad Mexicum incolæ, plures tamen e speciminibus valde mancis descriptæ, verisimiliter reducendæ. *Tréc. in Ann. Sc. Nat. ser.* 3, viii. 78, *t.* 1. *Walp. Ann.* i. 650. *Lam. Illustr. t.* 800. *Vell. Fl. Flum. Ic.* x. *t.* 101. *Miq. in Mart. Fl. Bras.* iv. i. 140, *t.* 46 *ad* 50. *Wawra, Bot. Pr. Max. Reise, t.* 85.

63. **Myrianthus,** *Beauv. Fl. Ow. et Ben.* i. 16, *quoad pl.* ♂ *t.* 11, *excl. fr. t.* 12. (Dicranostachys, *Tréc. in Ann. Sc. Nat. ser.* 3, viii. 85, *t.* 1.)—Flores dioici (v. monoici ?), ♂ in spicas repetiter ramosissimas dispositi, ♀ globoso-capitati. Fl. ♂ : Perianthium breve, 3–4-fidum, lobis latis imbricatis. Stamina 3–4, filamentis brevibus erectis liberis v. inter se varie connatis ; antheræ exsertæ, oblongæ. Ovarii rudimentum 0. Fl. ♀ : Perianthium ovoideum v. obovoideum, vertice ore parvo pertusum. Ovarium rectum, inclusum ; stylus breviter inclusus, apice stigmatoso exserto lineari recurvo ; ovulum ab apice pendulum. Perianthia fructifera in capitulum seu syncarpium arcte conferta et basi subconnata, pro maxima parte libera, acuta v. truncata, carnosula, fructus includentia, v. demum apice decidua fructum nudantia ; pericarpium (an endocarpium exocarpio cum perianthio concreto ?) durum, ovatum, compressiusculum, acutum. Semen conforme, testa membranacea ; albumen 0, cotyledones crasso-carnosæ, subæquales, radicula minima supera.—Arbores. Folia alterna, ampla, indivisa v. 3- v. 5-lobata partita v. foliolata, folio segmentisve argute dentatis coriaceis prominenter penniveniis subtus sæpe niveis ; stipulæ intrapetiolares, connatæ, magnæ v. breves, caducissimæ. Pedunculi ♂ repetiter dichotomi, paniculam amplam cymiformem formantes, ramulis ultimis brevibus floribus dense obtectis. Pedunculi ♀ breves, solitarii, capitulum unicum ferentes.

Species 4, Africæ tropicæ incolæ. In specie typica foliis digitatim partitis, cujus specimina florida utriusque sexus et fructus jam valde auctos a Bartero et a Mannio collecta et fructus maturos a Welwitschio accepimus, perianthia fructifera apice lata obtusissima v. retusa. In *M.* (*Dicranostachyde*, Tul.) *serrata*, foliis indivisis, fructus maturus ignotus est, sed jam post anthesin auctus perianthia ostendit apice acute prominentia. In specie altera inedita folia variant indivisa v. 3-partita, et in quarta pariter inedita 5–7-partita sunt. In omnibus florum structura eadem est. Fructus a Beauvois delineatus l. c. t. 12, evidenter ad stirpem longe alienam pertinet.

64. **Musanga,** *R. Br. App. Tuck. Congo*, 453.—Flores dioici, ♂ in capitula globosa paniculata dispositi, ♂ in massam ovatam v. obovatam conferti. Fl. ♂ : Perianthium ovoideo-tubulosum, ore truncatum. Stamen 1, filamento recto ; anthera brevis, exserta. Ovarii rudimentum 0. Fl. ♀ : Perianthium lineari-clavatum, vertice foramine minuto pertusum. Ovarium in fundo perianthii breve ; stylus filiformis, indivisus, apice stigmatoso breviter exserto acuto ; ovulum a basi erectum, orthotropum. Achænium perianthio parum aucto fibroso-carnoso apice crasso inclusum ; pericarpium crustaceum, durum, nitidum. Semen conforme, erectum, testa membranacea ; albumen tenue ; embryo rectus, cotyledonibus oblongis æqualibus, radicula brevi supera.—Arbor excelsa, habitu *Cecropiæ*. Folia alterna, longe petiolata, ampla, peltata, in segmenta 11–15 fere ad basin radiatim divisa, segmentis integerrimis subtus prominenter penniveniis, venulis transversis tenuissimis ; stipulæ magnæ, in unam intrapetiolarem connatæ, inflorescentias juniores includentes, mox deciduæ. Paniculæ ♂ ad axillas solitariæ, breviter pedunculatæ, repetito-ramosissimæ, capitulis parvis numerosissimis. Bracteæ intra capitula sub floribus minimis filiformes, apice subpeltato-dilatatæ. Spicæ ♀ ad axillas geminæ, pedunculatæ, magnæ, ovatæ v. oblongæ, compressæ, floribus minutis numerosissimis receptaculum carnosum undique densissime obtegentibus bracteis subulatis interstinctis.

Species 1, Africæ tropicæ occidentalis incola. *Benn. Pl. Jav. Rar.* 49.

65. **Coussapoa,** *Aubl. Pl. Gui.* ii. 955, *t.* 362, 363.—Flores dioici, globoso-capitati. Fl. ♂ : Perianthium tubulosum v. subclavatum, 3-dentatum 3-fidum v. 3-partitum, lobis imbricatis. Stamina 1 v. 2, filamentis connatis in columnam erectam ; antheræ ovatæ. Ovarii rudimentum 0. Fl. ♀ : Perianthium tubulosum v. clavatum, apice foramine minimo pertusum v. 3-dentatum. Ovarium inclusum ; stylus inclusus, stigmate solo exserto subpeltato penicillato-capitato indiviso ; ovulum erectum, orthotropum. Perianthia fructifera paullo aucta, apicem versus carnosula. Fructus inclusus, oblongus ; pericarpium carnosulum v. succulentum fere gelatinosum ; endocarpium crustaceum v. duriusculum, facile in valvas 2 solubile. Semen conforme, testa membranacea ; albumen 0 ; embryo rectus, cotyledonibus ovatis v. oblongis, radicula brevi supera.—Arbores

fruticosve lactescentes, nonnunquam supra arbores scandentes v. epiphytici. Folia alterna, petiolata, integerrima, coriacea, pennivenia v. 3-nervia; stipulæ interdum majusculæ, circa gemmam convolutæ, caducissimæ. Pedunculi in axillis solitarii v. gemini, ♂ sæpius dichotome paniculati, capitulis paucifloris, ♀ breviores, capitulum unicum majus v. pauca subconferta ferentes. Flores utriusque sexus in capitulis sessiles, arctissime conferti at non concreti. Bracteæ sub floribus filiformes, apice dilatatæ spathulatæ v. peltatæ.

Species enumeratæ 18, plures tamen certe reducendæ, Americæ australis inter tropicos incolæ. *Tréc. in Ann. Sc. Nat. ser.* 3, viii. 93, *t.* 1. *Walp. Ann.* i. 655. *Miq. Obs. Pl. Focke t.* 3, *et in Mart. Fl. Bras.* iv. i. 131, *t.* 42 *ad* 45. *Pœpp. et Endl. Nov. Gen. et Sp.* ii. *t.* 147.

66. **Conocephalus,** *Blum. Bijdr.* 483.—Flores dioici, globoso-capitati. Fl. ♂: Perianthium tubuloso-turbinatum, 4-fidum v. fere 4-partitum, lobis apice obtusis concavis valvatis. Stamina 4, filamentis erectis brevibus, v. perianthio longioribus; antheræ oblongæ, exsertæ. Ovarii rudimentum columnare v. clavatum. Fl. ♀: Perianthium clavato-tubulosum, angustum, obtusum, lobis 4 brevibus concavis crassiusculis. Ovarium inclusum; stylus brevis, indivisus, apice stigmatoso exserto lineari obliquo v. recurvo; ovulum a basi erectum, orthotropum. Fructus perianthio parum aucto tenuiter subcarnoso inclusus, oblongo-ovatus, compressus; pericarpium chartaceum, facile 2-valve. Semen erectum, testa membranacea; albumen pertenue v. 0; embryo rectus, cotyledonibus ovatis æqualibus, radicula brevi supera.—Frutices sæpe alte scandentes. Folia alterna, petiolata, sæpius ampla, coriacea, integerrima, subtus sæpius a basi prominenter pennivenia; stipulæ in unam intrapetiolarem connatæ. Inflorescentiæ axillares. Pedunculi ♂ sæpius ramosissimi, capitulis parvis. Capitula ♀ fructifera nunc 1–1½ poll. diametro, in pedunculo brevi subsolitaria, nunc vix ½ poll. diametro, in pedunculo plura. Flores ♂ arcte sessiles, ♀ sæpius breviter pedicellati. Adsunt etiam species 2 foliis tenuioribus angustioribus basi 3-nerviis, capitulis ♂ ad axillas 2 tantum v. paucis breviter pedunculatis, ♀ geminis brevissime pedunculatis.

Species ad 10, Indiæ orientalis et Archipelagi Malayani incolæ. *Benn. Pl. Jav. Rar.* 47, *t.* 12. *Tréc. in Ann. Sc. Nat. ser.* 3, viii. 87, *t.* 2. *Walp. Ann.* i. 654. *Miq. Fl. Ind. Bat. Suppl.* 416. *Wight, Ic. t.* 1959.

67. **Pourouma,** *Aubl. Pl. Gui.* ii. 891, *t.* 341.—Flores dioici, ♂ in glomerulos seu capitula cymoso-paniculata disposita, ♀ cymosi. Fl. ♂: Perianthium ovoideum obovoideum v. depresso-globosum, 3–4-dentatum v. lobatum, lobis subvalvatis. Stamina 3–4, filamentis erectis liberis v. basi connatis; antheræ ovatæ. Ovarii rudimentum 0. Fl. ♀: Perianthium tubulosum, crassiusculum, apice foramine minuto pertusum. Ovarium inclusum; stylus brevis, stigmate exserto peltato-discoideo dense papilloso; ovulum supra basin lateraliter affixum, ascendens, breviter amphitropum, micropyle terminali. Fructus ovoideus, perianthio aucto carnosulo v. succulento inclusus, erectus; pericarpium crustaceum v. induratum. Semen supra basin lateraliter affixum, funiculo a basi loculi erecto, apice sæpe incrassato, testa membranacea circa hilum crassiore (albumine tenui obducta?); embryo rectus, cotyledonibus crassis oblongis, radicula supera minima.—Arbores. Folia alterna, longe petiolata, indivisa v. interdum in eadem arbore palmatim 3–5-fida v. partita, cæterum pennivenia, venis primariis parallelis valde elevatis subplicata, integerrima, coriacea, subtus sæpe nivea v. molliter tomentosa; stipulæ magnæ, in unam intrapetiolarem spathiformem connatæ, caducissimæ. Pedunculi axillares, solitarii v. gemini, utriusque sexus cymoso-ramosi. Capitula v. glomeruli ♂ numerosa. Flores ♀ secus ramulos cymæ sessiles, approximati. Fructus maturi distincti, erecti, quam in cæteris generibus sæpius multo majores.

Species enumeratæ ad 20, Americæ australis inter tropicos incolæ. *Tréc. in Ann. Sc. Nat. ser.* 3, viii. 101, *t.* 2. *Walp. Ann.* i. 656. *Miq. in Mart. Fl. Bras.* iv. i. 123, *t.* 36 *ad* 41. *Pœpp. et Endl. Nov. Gen. et Sp.* ii. *t.* 141. *Karst. Fl. Colomb.* ii. *t.* 110.

TRIBUS VII. URTICEÆ.

68. **Urtica,** *Linn. Gen. n.* 1054. — Flores monoici v. dioici, glomerulis cymulosis spicatis racemosis v. paniculatis. Fl. ♂: Perianthium alte 4-fidum, lobis ovatis apice concavis imbricatis, alabastro medio depresso. Stamina 4. Ovarii rudimentum cupuliforme. Fl. ♀: Perianthium 4-partitum, segmentis inæqualibus, exterioribus sæpius multo minoribus, interioribus planiusculis v. rarius cucullatis. Ovarium rectum. Stigma sessile v. rarius stylo brevi fultum, penicillato-capitatum, deciduum v. persistens; ovulum a basi erectum. Achænium ovatum v. oblongum, compressum, perianthio aucto membranaceo v. rarius carnosulo inclusum; pericarpium membranaceum v. tenuissime crustaceum. Semen conforme, testa membranacea, a pericarpio sæpe vix separanda; albumen parcum; cotyledones subrotundæ.—Herbæ annuæ v. perennes, rarius basi frutescentes, pilis urentibus armatæ. Folia opposita, petiolata, dentata v. inciso-lobata, 5–7-nervia v. rarius 3-nervia; stipulæ laterales, liberæ v. in unam interpetiolarem connatæ. Inflorescentiæ unisexuales v. androgynæ, in axillis geminæ, i.e. cyma sessilis 2-fida, ramis brevissimis v. longioribus simplicibus v. paniculato-ramosis. Glomeruli basi bracteati; flores singuli sæpius ebracteati.

Species ad 30, per regiones temperatas subtemperatasque utriusque orbis latissime dispersæ. *Wedd. in DC. Prod.* xvi. i. 40; *Monogr. t.* 1. *Maxim. in Bull. Acad. Petersb.* xxii. 235; *Mel. Biol.* ix. 618. *Reichb. Ic. Fl. Germ. t.* 652 *ad* 654. *Kanitz in Flora* 1872, *t.* 1. *Eichw. Pl. Cauc. Casp. t.* 39. *Wight, Ic. t.* 690. *Moris, Fl. Sard. t.* 111. *Brot. Phyt. Lusit. t.* 151. *Webb, Phytogr. Canar. t.* 210, 211. *Seub. Fl. Azor. t.* 7. *Miq. in Mart. Fl. Bras.* iv. i. *t.* 67.

Inter species *U. hyperborea*, Jacquem., insignis est caule basi lignescente, perianthii fructiferi segmentis interioribus maximis planis orbicularibus. Caulis basi lignescit etiam in *U. morifolia*, Poit., et in *U. feroce*, Forst.

69. **Hesperocnide,** *Torr. et Gr. Bot. Whipple Exped.* 83 (139).—Flores monoici, glomerulis ad axillas sessilibus androgynis. Fl. ♂: Perianthium 4-partitum, segmentis ovatis concavis levissime imbricatis, alabastro medio depresso. Stamina 4. Ovarii rudimentum obovoideo-urceolatum. Fl. ♀: Perianthium ovatum, subclausum, apice minute 2-dentatum. Ovarium rectum; stigma sessile, capitato-penicillatum, persistens; ovulum a basi erectum. Achænium ovatum, compressum, perianthio aucto membranaceo arcte inclusum; pericarpium tenue. Semen conforme, testa membranacea; albumen tenue; cotyledones suborbiculatæ.—Herbæ annuæ, habitu *Urticæ urentis*, pilis urentibus armatæ. Folia opposita, dentata v. incisa, 3–5-nervia; stipulæ laterales, liberæ. Glomerulæ seu cymulæ densæ, floribundæ. Flores minuti, ebracteati. Fructus parvi, hispidi.

Species 2, altera boreali-Americana, altera Sandwicensis. *Wedd. in DC. Prod.* xvi. i. 67.

Genus *Urticæ* valde affine, differt imprimis perianthio fœmineo minute 2-dentato, segmentis nempe intimis fere ad apicem connatis, exterioribus deficientibus, et hoc charactere *Bœhmeriis* accedit, inter quas genus primum collocatum fuit, sed lege naturali a Weddellio rite ad *Ureras* translatum videtur.

70. **Nanocnide,** *Blume, Mus. Bot. Lugd. Bat.* ii. 154, *t.* 17.—Flores monoici, cymulis masculis pedunculatis, glomerulis fœmineis sessilibus. Fl. ♂: Perianthium 4–5-lobum v. partitum, lobis segmentisve latis leviter imbricatis, dorso sub apice transverse cristatis nudisve. Stamina 4–5. Ovarii rudimentum late obovoideum v. urceolatum. Fl. ♀: Perianthium alte 4-fidum v. 4-partitum, segmentis exterioribus latiusculis carinatis, interioribus angustis planis, omnibus dorso sub apice sæpius setiferis. Ovarium rectum; stigma penicillato-capitatum, stylo brevi nunc brevissimo fultum; ovulum a basi erectum. Achænium oblongum, perianthio vix aucto laxe stipatum ab eoque facile deciduum; pericarpium tenue. Semen conforme, testa membranacea; albumen parcum; cotyledones ovatæ v. ellipticæ.—Herbæ annuæ, habitu *Urticæ* nisi tenuiores. Folia alterna, petiolata, lata, grosse dentata v. subincisa, irregulariter 3–5-nervia; stipulæ laterales, liberæ. Pedunculi ♂ filiformes, in axillis solitarii; glomeruli ♀ in iisdem v. in diversis axillis arcte

sessiles v. pedunculati. Flores utriusque sexus bractea stipati. Perianthium ♀ post achænia delapsa sæpe persistens.

Species 2, Japoniæ aliarumque insularum Asiæ orientalis incolæ. *Wedd. in DC. Prod.* xvi. i. 69; *Monogr. t.* 9.

71. **Obetia,** *Gaudich. Voy. Bonite, t.* 82.—Flores dioici, glomerulis masculis laxe cymoso-paniculatis, fœmineis subsessilibus. Fl. ♂: Perianthium 5-partitum, segmentis concavis valvatis, alabastro depresso-globoso. Stamina 5. Ovarii rudimentum obovoideo-globosum. suburceolatum. Fl. ♀ (a nobis non visi): Perianthii segmenta 4, inæqualia, latiuscula, 2 interioribus majoribus. Ovarium primum erectum, mox obliquum; stigma oblongum, mox obliquum, ex icone papillosum vix penicillatum; ovulum a basi erectum. Achænium ovatum, compressum, perianthio aucto membranaceo laxe stipatum; pericarpium tenue. Semen conforme, testa membranacea; albumen parcum; cotyledones latæ.—Frutices (v. arbores?) pilis urentibus parce præditi, ramis crassis. Folia alterna, petiolata, lata, crenata sæpeque 3–5-loba, basi cordata, 3–5-nervia, pubescenti-villosa; stipulæ laterales, fere foliaceæ, diu persistentes. Cymæ ♂ laxæ floribundæ; glomeruli ♀ fere capitati, subsessiles. Bracteæ lineares.

Species 2, Madagascarienses. *Wedd. in DC. Prod.* xvi. i. 70; *Monogr. t.* 1.

72. **Fleurya,** *Gaudich. in Freyc. Voy. Bot.* 497, *et in Voy. Bonite, t.* 83.—Flores monoici v. dioici, glomerulis paniculatis v. interrupte racemoso-spicatis. Fl. ♂: Perianthium 4–5-partitum, segmentis ovatis lanceolatisve subvalvatis v. leviter imbricatis, alabastro globoso v. depresso. Stamina 4–5. Ovarii rudimentum globosum v. subclavatum. Fl. ♀: Perianthii segmenta 4, imbricata, nunc subæqualia, nunc valde inæqualia, postico interdum cucullato, antico minimo v. deficiente. Ovarium junius rectum mox obliquum; stigma oblique ovatum v. lineare, demum uncinato-inflexum, breviter papillosum, additis interdum ad basin lobis 2 minutis; ovulum a basi erectum. Achænium obliquum, compressum, e perianthio parum aucto exsertum; pericarpium membranaceum. Semen conforme, testa membranacea; albumen vix ullum; cotyledones latæ.—Herbæ annuæ, pilis urentibus sæpe nec semper præditæ. Folia alterna, petiolata, dentata, 3-nervia, cystolithis linearibus; stipulæ in unam intrapetiolarem 2-fidam connatæ, interdum obsoletæ. Florum glomeruli unisexuales v. androgyni, paniculis spicisve in axillis solitariis. Bracteæ paucæ. Flores et præsertim fructus sæpe arcte reflexi.

Species 8, per regiones tropicas utriusque orbis late dispersæ, ultra tropicos in Africa australi extensæ. *Wedd. in DC. Prod.* xvi. i. 71; *Monogr. t.* 1. *Jacq. Hort. Schœnbr. t.* 388 (*Urtica*). *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 21. *Wight, Ic. t.* 692 (*Urtica*), 1975. *Hensl. in Ann. Nat. Hist. ser.* 1, i. *t.* 12 (*Urtica*). *Saund. Refug. Bot. t.* 38.

Schychowskya, *Endl. in Ann. Mus. Vind.* i. 187, *t.* 13, quæ *Urtica ruderalis*, Forst., a Gaudichaudio ad *Fleuryam* relata, quoad flores ♀ et fructus cum hoc genere omnino convenit. Flores ♂ nobis desunt, ex Endlichero receptaculo longo carnoso-grumoso impositi sunt et filamenta late petaloideo-dilatata qualia in nulla alia specie *Fleuryæ* adhuc observata sunt.

73. **Sceptrocnide,** *Maxim. in Bull. Acad. Imp. Petersb.* xxii. 238; *Mél. Biol.* ix. 623.—Flores monoici, glomerulis cymulisve longe racemosis v. ♂ paniculatis. Fl. ♂: Perianthium 5-partitum, segmentis ovatis subvalvatis, alabastro depresso. Stamina 5, filamentis ad medium perianthio adnatis apice in alabastro inflexis, per anthesin porrectis exsertis. Ovarii rudimentum globosum. Fl. ♀: Perianthii segmenta 4, demum valde inæqualia, 2 interioribus ovalibus planis, 2 exterioribus minimis. Ovarium primum rectum, mox obliquum: stigma lineare, uno latere villosum, persistens; ovulum a basi erectum. Achænium oblique rotundatum, compressum, stipiti horizontali incumbens, toro aucto laminiformi lateraliter affixum, perianthii segmentis exterioribus fere obtectum v. lateraliter exsertum; pericarpium tenue. Semen conforme, testa membranacea; albumen sat copiosum; cotyledones latæ.—Herba elata, stimulis validis adspersa. Folia alterna, petiolata, ampla, grosse dentata, penninervia; stipulæ laterales, parvæ, caducæ. Racemi ♀ in axillis superioribus tenues longi (sæpe subpedales), florum fasciculis seu

cymulis numerosis laxe paucifloris secus rhachin dissitis. Inflorescentiæ ♂ a nobis non visæ, ex Maximoviczio in axillis inferioribus sitæ quam ♀ breviores ramosæque. Bracteæ 0.

Species 1, Japonica, habitu et characteribus plerisque *Laporteæ canadensi*, Gaud., valde affinis.

74. **Laportea,** *Gaudich. in Freyc. Voy. Bot.* 498.—Flores monoici v. dioici, glomerulis v. cymulis dichotome paniculatis, rarius racemosis. Fl. ♂: Perianthium 4–5-partitum, segmentis ovatis subvalvatis v. leviter imbricatis, alabastro depresso. Stamina 4–5. Ovarii rudimentum clavatum v. subglobosum. Fl. ♀: Perianthii lobi v. segmenta 4, nunc subæqualia nunc valde inæqualia, exterioribus minoribus uno sæpe minuto v. deficiente. Ovarium primum rectum, mox obliquum; stigma lineare, sæpius elongatum, uno latere papillosum, demum sæpe reflexum; ovulum a basi erectum. Achænium obliquum, plano-compressum v. leviter ventricosum, perianthio membranaceo immutato v. vix aucto basi stipatum, et nonnunquam toro oblique producto breviter stipitatum; pericarpium membranaceum v. carnosulum. Semen conforme, testa membranacea; albumen tenuissimum v. 0; cotyledones latæ.—Herbæ perennes frutices v. arbores, pilis urentibus sæpius præditæ. Folia alterna, sæpe ampla, dentata rarius integerrima, pennivenia rarius 3-nervia; stipulæ distinctæ v. in unam intrapetiolarem plus minus connatæ, deciduæ. Paniculæ ad axillas solitariæ, cymoso-dichotomæ v. rarius ad racemum simplicem reductæ, unisexuales v. rarissime androgynæ, ♀ in axillis superioribus sæpe valde elongatæ, ♂ inferiores sæpius breviores densiores et ramosiores. Flores et præsertim fructus sæpe reflexi. Bracteæ paucæ v. 0.

Species ad 25, per regiones calidiores orbis veteris late dispersæ, paucæ in America boreali extratropica v. in Mexico vigentes, in America australi desunt. *Wedd. in DC. Prod.* xvi. i. 78; *Monogr. t.* 2. *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 23. *Maxim. in Bull. Acad. Petersb.* xxii. 237; *Mel. Biol.* ix. 622.

Genus e Weddellio in sectiones 4 sequentes dividitur:—

1. *Discocarpus.* Species 2 Mexicanæ v. Americæ centralis, fruticosæ v. arborescentes, achænio magno planissimo tenuiter membranaceo disciformi insignes. DISCOCARPUS, *Liebm. in K. Dansk. Vidensk. Selsk. Skrift. ser.* 5, ii. 308, *non Kl.*

2. *Sclepsion.* Species typicæ generis, habitu et patria variæ. *Wight, Ic. t.* 689 (*Urtica*), 1972.

3. *Sarcopus.* Species 4 Australienses v. insularum maris Pacifici, pedicellis fructiferis botuliformi-incrassatis. *Benth. Fl. Austral.* vi. 191. *Seem. Fl. Vit. t.* 59.

4. *Dendrocnide.* Floris ♀ perianthii segmenta subæqualia. Species 6, Asiaticæ, inclusa *L. crenulata*, Wight, Ic. t. 686 (*Urtica*); Gaudich. Voy. Bonite t. 81 (*L. latifolia*); Bedd. Fl. Sylv. t. 306; Seem. Fl. Vit. t. 60, cui achænium utrinque leviter ventricosum pericarpio carnosulo et sic *Ureræ* accedente. DENDROCNIDE, *Miq. in Pl. Jungh.* i. 29.

75. **Urera,** *Gaudich. in Freyc. Voy. Bot.* 496.—Flores dioici v. rarius monoici, glomerulis laxe paniculatis. Fl. ♂: Perianthium 4–5-partitum, segmentis ovatis leviter imbricatis, alabastro depresso. Stamina 4–5. Ovarii rudimentum globosum v. fere cupuliforme. Fl. ♀: Perianthii lobi v. segmenta 4, subæqualia v. exteriora minora. Ovarium rectum v. obliquum; stigma subsessile, penicillato-capitatum v. rarissime sublanceolatum, persistens; ovulum a basi erectum. Achænium rectum v. obliquum, compressum v. ventricosum, perianthio aucto carnosulo v. baccato alte stipatum v. inclusum; pericarpium tenuiter crustaceum. Semen conforme, testa membranacea; albumen parcissimum v. 0; cotyledones latæ.—Frutices v. arbusculæ rarius suffrutices, pilis urentibus sæpius conspersi. Folia alterna, integerrima dentata v. lobata, pennivenia v. 3–5-nervia; stipulæ liberæ v. in unam intrapetiolarem plus minus connatæ. Paniculæ dichotome cymosæ v. irregulariter ramosæ, unisexuales, in axillis v. ad nodos vetustiores solitariæ, breviter longiusve pedunculatæ. Bracteæ parvæ v. 0.

Species 18, Americæ et Africæ tropicæ necnon insularum Mascarensium et maris Pacifici incolæ, in Asia tropica deesse videntur. *Wedd. in DC. Prod.* xvi. i. 89; *Monogr. t.* 2. *Jacq. Hort. Schænbr. t.* 386, 387 (*Urtica*). *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 22. *Miq. in Mart. Fl. Bras.* iv. i. *t.* 66.

Species 5 ex Africa tropica et insulis Mauritianis caulem præbent frutescentem scandentemque. In his includimus SCEPOCARPUM, *Wedd. in DC. Prod.* xvi. i. 98, ex specimine fructifero solo notum.

Perianthium fructiferum nobis omnino idem videtur quod in *U. obovata*, ore sæpius vix dentato, achænio brevissime exserto; interdum vero perianthium fere ad basin in segmenta 2 v. 3 dividitur, quod etiam de *U. acuminata* aliisque prædicatur. Inflorescentia ♀ stimulis quasi involucrata, etc. omnino *U. obovatæ*, a qua *Scepocarpus* specifice differt foliorum forma, et indumento.

76. **Gyrotænia**, *Griesb. in Mem. Amer. Acad. ser.* 2, viii. 174.—Flores dioici, **densè glomerato-spicati, rhachi fructifera carnoso-dilatata. Fl. ♂: Perianthium 4-partitum, segmentis latis imbricatis, alabastro depresso. Stamina 4. Ovarii rudimentum subglobosum, umbilicatum. Fl. ♀: Perianthium parvum, 2-lobum. Ovarium rectum; stigma sessile, penicillato-capitatum; ovulum a basi erectum. Achænium oblique ovatum, compressum, basi perianthio immutato stipatum; pericarpium crustaceum v. tenuiter carnosulum. Semen conforme, testa membranacea; albumen parcum; cotyledones latæ.—Frutices v. arbusculæ (stimulis nullis?). Folia alterna, dentata v. integerrima; basi 3-nervia; stipulæ parvæ, laterales, liberæ, caducæ. Spicæ axillares, sessiles v. subsessiles, rarius breviter ramosæ. Flores secus rhachin glomerati v. glomerulis confluentibus densissime conferti. Fructus in rhachi carnosa numerosissimi, minimi.**

Species 3, Indiæ occidentalis incolæ. *Wedd. in DC. Prod.* xvi. i. 99.

77. **Girardinia**, *Gaudich. in Freyc. Voy. Bot.* 498.—Flores dioici v. monoici, **densè spicati. Fl. ♂: Perianthium 4-5-partitum, segmentis valvatis, alabastro subumbilicato. Stamina 4-5. Ovarii rudimentum globosum v. cupulatum. Fl. ♀: Perianthium ovoideo-tubulosum, apice 2-3-dentatum, per anthesin usque ad basin uno latere fissum subspathaceum, addito interdum segmento (v. bractea?) altero parvo fere setiformi. Ovarium rectum; stigma subulatum, acutum, minutissime papillosum, demum vix obliquum; ovulum a basi erectum. Achænium latum, valde compressum, perianthio haud v. parum aucto unilateraliter stipatum; pericarpium crassiusculum, interdum subduplex, exteriore membranaceo, interiore tenuiter cartilagineo. Semen conforme, testa membranacea; albumen tenuissimum v. 0; cotyledones latæ.—Herbæ elatæ, basi interdum frutescentes, pilis v. aculeis urentibus sæpius crebris armatæ. Folia alterna, grosse serrata v. varie lobata, 3-nervia; stipulæ in unam intrapetiolarem sæpius latiusculam foliaceam connatæ. Spicæ simplices v. paniculato-ramosæ, ad axillas solitariæ v. geminæ, ♂ sæpius longæ, tenues, floribus secus rhachin glomeratis, ♀ sessiles, densissimæ, pilis aculeisve rhacheos flores superantibus creberrimisque horridæ, breves globosæ v. oblongæ, v. elongatæ apiceque subscorpioideæ.**

Species 7, Asiæ et Africæ tropicæ incolæ. *Wedd. in DC. Prod.* xvi. i. 100; *Monogr. t.* 2. *Dcne. in Jacquem. Voy. Bot. t.* 153. *Wight, Ic. t.* 687 (*Urtica*). *Bl. Mus. Bot. Lugd. Bat.* ii. *t.* 49.

78. **Pilea**, *Lindl. Collect. t.* 4. (Dubreuilia, *Gaudich. in Freyc. Voy. Bot.* 495. Adike, *Rafin. ex Wedd.*)—Flores monoici v. dioici, ad axillas cymulosi. Fl. ♂: Perianthium 4-partitum, rarius 2-3-partitum, segmentis concavis carnosulis subvalvatis interdum in cupulam truncatam connatis, dorso sæpe mucronatis v. appendiculatis. Stamina 4, rarius 2 v. 3. Ovarii rudimentum conicum v. oblongum. Fl. ♀: Perianthium 3-partitum, segmentis inæqualibus, majore interdum dorso gibboso v. cucullato. Staminodia segmentis opposita, squamiformia, nunc minuta v. inconspicua. Ovarium rectum; stigma sessile, breviter penicillatum; ovulum a basi erectum. Achænium ovatum v. orbiculare, compressum, parum obliquum, perianthio vix v. parum aucto stipatum v. subinclusum; pericarpium membranaceum. Semen conforme, testa tenui; albumen vix ullum; cotyledones latæ.—Herbæ annuæ v. perennes, rarius basi frutescentes, interdum repentes v. diffusæ. Folia opposita, cujusve paris æqualia v. valde inæqualia, integerrima v. dentata, 3-nervia v. subenervia; stipulæ in unam intrapetiolarem connatæ. Cymæ ad axillas solitariæ, nunc densе capituliformes nunc laxe paniculato-ramosæ, sessiles v. pedunculatæ. Bracteæ parvæ, rarissime paucæ majores.

Species ad 160, per regiones tropicas utriusque orbis late dispersæ, in Australia tamen desunt. *Wedd. in DC. Prod.* xvi. i. 105; *Monogr. t.* 6 *ad* 8. *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 18. *Miq. Fl. Ind. Bat.* i. ii. *t.* 17, *et in Mart. Fl. Bras.* iv. i. *t.* 68 *ad* 70. *Baker, Fl. Maurit.* 274. *Maxim. in Bull. Acad. Petersb.* xxii. 242; *Mel. Biol.* ix. 629. *Wight, Ic. t.* 1973, 1974. *Bot. Mag. t.* 2481 2567 (*Urtica*).

79. **Achudenia**, *Blume, Mus. Bot. Lugd. Bat.* ii. 57, *t.* 20.—Flores polygami, glomerulis laxe cymosis. Fl. ♂: Perianthium 5-partitum, segmentis inæqualibus subimbricatis apice dorso minute appendiculatis. Stamina 5. Ovarii rudimentum minutum. Fl. ♀: Perianthium 5-partitum, segmentis parum inæqualibus. Staminodia squamiformia, parva v. perianthio vix dimidio breviora. Ovarium subobliquum; stigma sessile, villosiusculum; ovulum a basi erectum. Achænium compressum, perianthio persistente laxe inclusum; pericarpium tenuiter crustaceum. Semen erectum, testa membranacea; albumen carnosum; cotyledones ovatæ.— Herbæ teneræ, ramosæ, diffusæ v. repentes. Folia opposita, petiolata, cujusve paris inæqualia, grosse dentata, 3-nervia; stipulæ intrapetiolares, deciduæ. Cymæ ad axillas longe pedunculatæ, parvæ densæque v. laxe divaricatæ, floribus masculis fœmineis et rarius hermaphroditis in iisdem glomerulis mixtis.

Species 2, typica Javanica, a nobis non visa. *Wedd. DC. in Prod.* xvi. i. 163; altera Japonica, *Maxim. in Bull. Acad. Petersb.* xxii. 241; *Mel. Biol.* ix. 627.

Genus primo intuitu *Nanocnidem* refert, sed foliis oppositis florumque structura facile dignoscendum.

80. **Lecanthus**, *Wedd. in Ann. Sc. Nat. ser.* 4, i. 187, *et in DC. Prod.* xvi. i. 164; *Monogr. t.* 9.—Flores monoici v. dioici, receptaculo lato discoideo insidentes. Fl. ♂: Perianthium 4–5-partitum, segmentis parum inæqualibus membranaceis leviter imbricatis apice dorso leviter gibbosis, alabastro obconico. Stamina 4–5. Ovarii rudimentum parvum. Fl. ♀: Perianthium 3-partitum, segmentis inæqualibus planiusculis v. magis minusve cucullatis. Staminodia parva, squamiformia. Ovarium rectiusculum; stigma penicillatum, deciduum; ovulum a basi erectum. Achænium rectum, parum compressum, perianthio persistente laxe stipatum eoque longius; pericarpium crassiuscule membranaceum. Semen conforme, testa membranacea; albumen haud copiosum; cotyledones latæ.— Herba annua v. perennis habitu *Urticæ* v. *Pileæ*, inflorescentia *Elatostematis*. Folia opposita, petiolata, membranacea, serrato-dentata, 3-nervia; stipulæ in unam intrapetiolarem connatæ. Receptacula in axillis solitaria, pedunculata, primum late subcampanulata, mox discoideo-expansa, floribus masculis fœmineisque in eodem receptaculo mixtis v. in diversis separatis. In capitulis ♀ flores nonnulli sæpe adsunt steriles, longe pedicellati, ovario mox abortiente staminodiis auctis.

Species 1, Indiæ orientalis incola. *Royle, Ill. Himal. Bot. t.* 83 (*Procris peduncularis et P. obtusa*). *Wight, Ic. t.* 1985 (*Elatostemma*).

81. **Pellionia**, *Gaudich. in Freyc. Voy. Bot.* 494, *t.* 119.—Flores dioici v. monoici, dense cymosi v. subcapitati. Fl. ♂: Perianthium 5- rarius 4-partitum, segmentis obtusis membranaceis imbricatis sub apice dorso mucrone v. cornu appendiculatis. Stamina 5, rarius 4. Ovarii rudimentum parvum. Fl. ♀: Perianthii segmenta 5, rarius 4, æqualia v. inæqualia, nuda v. in flore sterili dorso appendiculata. Staminodia squamiformia, inflexa, nunc minuta v. 0. Ovarium rectum; stigma sessile, penicillatum; ovulum a basi erectum. Achænium compressum v. subteres, perianthio persistente immutato stipatum v. aucto vestitum; pericarpium membranaceum. Semen conforme, testa membranacea; albumen parcissimum; cotyledones ovatæ.—Herbæ basi sæpe repentes, rarius suffrutescentes. Folia specie alterna, disticha, breviter petiolata v. subsessilia, basi valde inæqualia, latere minori apicem rami spectante, integerrima v. dentata, addito sæpius altero nano sublaterali sæpe altius affixo, vix vere opposito; stipulæ intrapetiolares indivisæ, parvæ v. obsoletæ; folia omnia perfecte opposita in speciminibus nostris non deteximus. Florum cymæ ad axillas solitariæ, sessiles v. pedunculatæ, dense floribundæ, nunc in capitulum depressum contractæ, nunc divergentim ramosiores, rhachi vix dilatata nec in receptaculum disciformem expansa. Flores ♂ et ♀ in iisdem v. in diversis cymis; steriles evidentius pedicellati, sepalis appendiculatis, in capitulis fœmineis cum floribus fertilibus subsessilibus sæpe mixti; in speciebus nonnullis flores ♂ in cymas laxas ad axillas superiores pedunculatas dispositi, ♀ in axillis inferioribus dense capitati, capitulis arcte sessilibus.

Species 15, Asiæ tropicæ et orientalis usque ad Japoniam, v. insularum maris Pacifici incolæ. *Wedd. in DC. Prod.* xvi. i. 165; *Monogr. t.* 5, 6. *Maxim. in Bull. Acad. Petersb.* xxii. 244; *Mel. Biol.* ix. 632.

In *P. umbellata*, Wedd., seu *Elatostemate umbellato*, Blume, Mus. Bot. ii. t. 19, bracteæ flores ♂ stipantes fere in involucrum connatæ sunt, et species quasi medium tenet inter *Pellioniam* et *Elatostema*, a Maximowiczio ad *Elatostema* revocatur.

Polychroa, *Lour. Fl. Cochinch.* 559, ab Endlichero ad *Amarantum* relata, est ex auctoris descriptione verisimiliter *Pelloniæ* species, *P. brevifoliæ*, Benth., valde affinis, in China inculta, et ob pulchritudinem foliorum versicolorum culta, speciminibus tamen nullis a botanicis recentioribus visis haud tuto determinanda.

82. **Elatostema,** *Forst. Char. Gen.* 105, *t.* 53. (Langeveldia, *Gaudich. in Freyc. Voy. Bot.* 494.)—Flores monoici v. dioici, depresso-capitati, receptaculo demum lato discoideo v. lobato insidentes. Fl. ♂: Perianthium 4–5-partitum, segmentis membranaceis v. fere hyalinis leviter imbricatis, dorso sub apice sæpe tuberculatis v. breviter appendiculatis. Stamina 4–5. Ovarii rudimentum parvum. Fl. ♀: Perianthium e segmentis 3–5 parvis angustis v. omnino deficiens. Staminodia parva, squamiformia, interdum desunt. Ovarium rectum; stigma sessile, parce penicillatum, mox evanidum; ovulum a basi erectum. Achænium ovatum v. ellipsoideum, compressum, sæpe striatum, perianthio dum adsit immutato stipatum; pericarpium membranaceum. Semen conforme, testa membranacea; albumen sæpius 0; cotyledones ovatæ.—Herbæ annuæ v. perennes, rarius basi lignosæ. Folia specie alterna, sessilia v. breviter petiolata, disticha, basi valde inæquilatera, margine angustiore rami apicem spectante, grosse serrata v. rarius integerrima, 3–5-nervia, addito interdum altero nano stipuliformi opposito reflexoque v. laterali et erectiore; stipulæ intrapetiolares, indivisæ. Flores prima juventute receptaculo globoso clausoque v. campanulato ore coarctato inclusa, demum receptaculo varie expanso discoideo lobato v. partito insidentes, sessiles v. breviter pedicellati, in quoque receptaculo unisexuales. Receptacula e rhachibus cymæ dilatatis confluentibusque constantia, in axillis solitaria gemina v. rarius plura, sessilia v. pedunculata. Bracteæ intra capitulum sæpe præsertim in ♂ late membranaceæ flores singulos includentes, in capitulo ♀ sæpius lineares v. parvæ. Filamenta in flore ♂ interdum nec semper segmentis alte adnatæ.

Species ad 50, per Asiam et Africam intra tropicos late dispersæ, in Asia orientali usque ad Japoniam extensæ. *Wedd. in DC. Prod.* xvi. i. 171; *Monogr. t.* 9, 10. *Maxim. in Bull. Acad. Petersb.* xxii. 245; *Mel. Biol.* ix. 634. *Wight, Ic. t.* 1983, 1984, 2091. *Brongn. in Duperr. Voy. Coq. Bot. t.* 45, 46. *Seem. Fl. Vit. t.* 61.

83. **Procris,** *Juss. Gen. Pl.* 403. (Sciophila, *Gaudich. in Freyc. Voy. Bot.* 493, *t.* 120. Sciobia, *Reichb. ex Endl. Gen. Suppl.* iv. ii. 37.)—Flores monoici v. dioici, ♂ glomerati receptaculo parvo, ♀ capitati receptaculo subgloboso carnoso. Fl. ♂: Perianthium 5- v. rarius 4-partitum, segmentis membranaceis valvatis v. vix levissime imbricatis exappendiculatis. Stamina 5, rarius 4. Ovarii rudimentum obovoideum. Fl. ♀: Perianthium sub anthesi minimum, cyathiforme v. 3–4-partitum. Ovarium rectum; stigma sessile, penicillatum, mox evanidum; ovulum a basi erectum. Achænium ovatum, perianthii segmentis auctis carnosulis fere obtectum v. e perianthio minimo exsertum; pericarpium rigide membranaceum v. subcrustaceum. Semen conforme, testa tenuiter membranacea; albumen 0 (v. parcissimum?); cotyledones ovatæ.—Suffrutices v. frutices, interdum epiphytici, caule sæpe succulento. Folia alterna, in speciebus typicis breviter petiolata, basi valde inæquilatera, integerrima v. leviter serrata, carnosula, penninervia; stipulæ intrapetiolares, indivisæ. Inflorescentiæ axillares v. ad nodos defoliatos, in speciebus typicis glomeruli ♂ laxe cymosi, capitula ♀ majuscula solitaria subsessilia. In *P. grandi* folia longe petiolata ampla æquilatera, stipulis integris interdum magnis. In *P. lævigata* capitula ♀ uti glomeruli ♂ parva, globosa, ad nodos fasciculata, breviter pedunculata.

Species 5 v. 6, Asiæ et Africæ tropicæ et insularum Mascarensium et maris Pacifici incolæ. *Wedd. in DC. Prod.* xvi. i. 191; *Monogr. t.* 6. *Hook. Ic. Pl. t.* 1295.

84. **Bœhmeria,** *Jacq. Stirp. Amer.* 246, *t.* 157. (Splitgerbera, *Miq. Comm. Phytogr.* 133, *t.* 14. Duretia, *Gaudich. in Freyc. Voy. Bot.* 500 *in adnot.*)—Flores monoici v. dioici, utriusque sexus globoso-glomerati. Fl. ♂ : Perianthium 4-lobum v. 4-partitum, rarius 3- v. 5-partitum, lobis segmentisve ovatis valvatis dorso sub apice mucronatis v. muticis. Stamina 4, rarius 3 v. 5. Ovarii rudimentum clavatum v. subglobosum. Fl. ♀ : Perianthium tubulosum, compressum v. ventricosum, ore sæpius contracto 2–4-dentato, fructiferum interdum auctum in angulos 2 acutos v. alatos dilatatum v. intus cellulosum. Ovarium inclusum, sessile v. stipitatum ; stigma elongato-filiforme, uno latere pilosum, diu persistens nec in ovario articulatum ; ovulum a basi erectum. Achænium perianthio marcescente inclusum eique haud raro accretum ; pericarpium tenuiter crustaceum, dum liberum extus nitidum. Semen conforme, testa tenuiter membranacea ; albumen varium ; cotyledones ellipticæ v. ovatæ.—Arbusculæ frutices v. suffrutices, magis minusve pubescentes. Folia opposita v. alterna, æqualia v. inæquilatera, dentata et rarius 2-loba, 3-nervia ; stipulæ liberæ v. rarius intra petiolum basi connatæ, deciduæ. Florum glomeruli fere semper unisexuales, ad axillas v. ad nodos v. secus rhachin spicæ v. ramos cymæ paniculiformis sessiles. Bracteæ parvæ, scariosæ.

Species ad 45, regionum calidiorum utriusque orbis incolæ, pleræque tropicæ, in America tamen a Chile usque ad Americam borealem et in Asia orientali usque ad Japoniam extensæ. *Wedd. in DC. Prod.* xvi. i. 196 ; *Monogr. t.* 11. *Maxim. in Bull. Acad. Petersb.* xxii. 249 ; *Mel. Biol.* ix. 639. *Benth. Fl. Austral.* vi. 184. *Jacq. Hort. Vind. t.* 166. *Bonpl. Jard. Malm. t.* 15. *Endl. Iconogr. t.* 86. *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 13, 56. *Hook. Kew Journ.* iii. *t.* 8. *Wight, Ic. t.* 688, *et* 691 (*Urtica*), *t.* 1977 (*Splitgerbera*). *Miq. in Mart. Fl. Bras.* iv. i. *t.* 64, 65.

85. **Chamabaina,** *Wight, Ic.* vi. 11, *t.* 1981.—Flores monoici v. dioici, utriusque sexus globoso-glomerati. Fl. ♂ : Perianthium alte 4-lobum, segmentis valvatis dorso sub apice gibbosis mucronatisve. Stamina 4. Ovarii rudimentum clavatum. Fl. ♀ : Perianthium tubulosum, compressum, ore contracto minute 4-dentato. Ovarium inclusum ; stigma patens, ovatum, fimbriatum, stylo brevi fultum ; ovulum a basi erectum. Perianthium fructiferum crassiuscule membranaceum, turbinatum, vertice planum subclausum. Achænium inclusum, compressiusculum ; pericarpium rigidulum. Semen conforme, testa tenuiter membranacea ; albumen parcum ; cotyledones ovatæ.—Herba diffusa, tenuis, basi radicans. Folia opposita, petiolata, dentata, 3-nervia ; stipulæ intrapetiolares geminæ, latæ, membranaceo-scariosæ, in axillis floriferis glomerulos juniores includentes, inflorescentia perfecta sub glomerulis persistentes. Glomeruli ad axillas sessiles, superiores masculi, inferiores sæpius fœminei. Flores sessiles v. breviter pedicellati v. masculi nonnulli longius pedicellati.

Species 1, montium Indiæ orientalis incolæ. *Wedd. in DC. Prod.* xvi. i. 218 ; *Monogr. t.* 12.

86. **Pouzolzia,** *Gaudich. in Freyc. Voy. Bot.* 503.—Flores monoici, rarius dioici, ad axillas glomerulati. Fl. ♂ : Perianthium 4–5-lobum v. partitum, rarius 3-partitum, segmentis valvatis apice nunc concavis nunc abrupte inflexis dorsoque transverse plicatis. Stamina 4–5, rarius 3. Ovarii rudimentum clavatum v. oblongum. Fl. ♀ : Perianthium tubulosum, sæpe rostratum, ore contracto 2–4-dentato. Ovarium inclusum ; stigma filiforme, uno latere villosum, cito deciduum ; ovulum a basi erectum. Achænium perianthio marcescente aucto v. vix mutato inclusum, ab eo sæpius liberum ; pericarpium nitidum, fragile. Semen conforme, testa tenuiter membranacea ; albumen perparcum v. 0 ; cotyledones ovatæ.—Herbæ suffrutices v. frutices. Folia alterna v. inferiora rarissime omnia opposita, sæpius integerrima, 3-nervia, superiora gradatim minora, summa interdum in bracteas abeuntia ; stipulæ liberæ, sæpe persistentes. Florum glomeruli unisexuales v. androgyni, ad axillas sessiles. Flores plus minus pedicellati. Bracteæ parvæ.

Species ad 48, regionum tropicarum utriusque orbis incolæ, in America tamen pauciores. *Wedd. in DC. Prod.* xvi. i. 219 ; *Monogr. t.* 13. *Benth. Fl. Austral.* vi. 186.

Pouzolzia a Weddellio in genera duo dividitur, quæ tamen characteribus vix constantibus separantur et potius pro sectionibus duabus sequentibus habenda :—

1. *Pouzolzia.* Foliorum nervi primarii sæpius ramosi ; perianthii ♂ lobi dorso convexi v. gibbi

nec transverse plicati. *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 58. *Wight, Ic. t.* 1980, 2098 *ad* 2101. Huc includit Weddell genera sequentia a variis proposita. LEPTOCNIDE, *Blume, Mus. Bot. Lugd. Bat.* ii. 193, *t.* 57, species Malayana, foliis dentatis insignis, et STACHYOCNIDE, *Blume l.c.* 227, *t.* 55, species Luzonica florum glomerulis in racemum longum terminalem aphyllum ut in *Distemate* disposita. MARGAROCARPUS, *Wedd. in Ann. Sc. Nat. ser.* 4, i. 203 (LEUCOCOCCUS, *Liebm. in K. Dansk. Vid. Selsk. ser.* 5, ii. 311), species Americanæ perianthio fructifero nec costato nec alato. ELKANIA, *Schlecht. in Pl. Ind. Hohenack., distrib.*, species Nilgherica, floribus laxe cymosis insignis.

2. *Memorialis.* Folia integerrima, nervis 3 primariis simplicibus; perianthii ♂ lobi sæpius (nec semper) abrupte inflexi, dorso transversim angulati v. subplicati, alabastro truncato. *Wight, Ic. t.* 1978, 1979, 2092 *ad* 2097. *Benn. Pl. Jav. Rar. t.* 14. GONOSTEGIA, *Turcz. in Bull. Soc. Imp. Nat. Mosc.* 1846, ii. 509. MEMORIALIS, *Hamilt. in Wall. Cat. Herb. Ind. n.* 4598 *et* 4601. *Wedd. in DC. Prod.* xvi. i. 235[2]. HYRTANANDRA, *Miq. Pl. Jungh.* i. 25.

87. **Distemon,** *Wedd. Monogr. Urt.* 550, *t.* 20, *et in DC. Prod.* xvi. i. 235[62].—**Flores** monoici, glomerulis parvis androgynis. Fl. ♂: Perianthium campanulatum, 2-fidum rarius 3-fidum, lobis inflexis acuminatis subvalvatis, alabastro acutiusculo. Stamina 2, rarius 3. Ovarii rudimentum lanatum. Fl. ♀: Perianthium tubuloso-ventricosum, ore contracto minute dentato. Ovarium inclusum, perianthio plus minus adnatum; stigma lineare, deciduum; ovulum a basi erectum. Perianthium fructiferum incrassatum, extus fere carnosum, strato interiore indurato. Achænium arcte inclusum, perianthio subadhærens sed maturum facile solvendum; pericarpium tenue, fragile. Semen conforme, testa tenuiter membranacea; albumen sat copiosum; cotyledones latæ.—Herba perennis, habitu *Eudroguetiæ* v. *Pouzolziæ* (*Stachyocnides*). Folia alterna, petiolata, grosse dentata; stipulæ laterales, liberæ. Florum glomeruli ad apices ramorum laxe spicati, foliis floralibus ad bracteas reductis, sub quaque bractea solitarii, exinvolucrati, floribus in glomerulo 1–2 fœmineis, 2 v. paucis masculis. Spica terminalis, elongata, interdum breviter ramosa, et spicæ breviores sæpe in axillis foliorum superiorum adsunt.

Species 1, Indiæ orientalis incola. Genus a Weddellio sub *Forskohliis* enumeratum, sed flores masculos sæpe 3-meros invenimus, nec unquam ad segmentum stamenque unicum reductos et ovarii rudimentum semper adest.

88. **Cypholophus,** *Wedd. in Ann. Sc. Nat. ser.* 4, i. 198, *in DC. Prod.* xvi. i. 235[9]; *Monogr. t.* 12.—Flores monoici v. dioici, utriusque sexus dense globoso-glomerati. Fl. ♂: Perianthium 4-partitum, segmentis valvatis, dorso sub apice mucronatis nudisve. Stamina 4. Ovarii rudimentum obovoideum. Fl. ♀: Perianthium tubuloso-ventricosum, ore contracto 2-dentato v. inæqualiter 4-dentato. Ovarium rectum, inclusum; stigma breviter v. longius lineare, recurvum, latere exteriore papilloso-piloso v. longe fimbriato; ovulum a basi erectum. Achænium perianthio carnosulo v. subbaccato arcte vestitum; pericarpium crustaceum, superne sæpe crassum, induratum. Semen conforme, testa tenuiter membranacea; albumen sat copiosum; cotyledones ellipticæ.—Arbores fruticesve. Folia opposita, petiolata, serrata, 3-nervia, sæpe (nec semper) bullato-rugosissima, in pari æqualia v. valde disparia; stipulæ liberæ, deciduæ. Florum glomeruli ad axillas v. ad nodos inferiores arcte sessiles, sæpius densissimi, caulem demum amplectentes. Flores ♂ sæpe pedicellati, caducissimi, ♀ sessiliores.

Species 9, Archipelagi Malayani et insularum maris Pacifici incolæ. *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 48 (*Bœhmeria*). *Seem. Fl. Vit. t.* 62 (*Bœhmeria*).

89. **Touchardia,** *Gaudich. Voy. Bonite, t.* 94.—Flores dioici, utriusque sexus dense globoso-glomerati. Fl. ♂: Perianthium 5-partitum, segmentis membranaceis subimbricatis sub apice dorso leviter mucronatis. Stamina 5. Ovarii rudimentum clavatum. Fl. ♀: Perianthium alte 4-lobum, lobis 2-seriatim imbricatis apice incrassatis concavisque. Ovarium rectum, inclusum; stigma brevissimum v. oblongum, uno latere papilloso-penicillatum, stylo brevi fultum; ovulum a basi erectum. Achænium perianthio carnosulo laxe inclusum, compressiusculum, pericarpium fragile. Semen conforme, testa tenuiter membranacea; albumen mediocre; cotyledones ovatæ.—Frutex elatus, glaber. Folia alterna, longe petiolata, maxima, dentata, pennivenia et basi sub-3-nervia; stipulæ magnæ, in unam intrapetiolarem connatæ. Florum glomeruli stricte globosi, ramos

paucos paniculæ lateralis terminantes, v. uno alterove secus ramum paniculæ sessili. Flores in glomerulo fere sessiles, bracteis parvis scariosis.

Species bene nota 1, insularum Sandwicensium incola. *Wedd. in DC. Prod.* xvi. i. 235[12]; *Monogr. t.* 13, et forte alteram legit Moseley in insulis Admiralty, foliis pariter maximis, glomerulis masculis irregularibus subcarnosis, structura in speciminibus nostris vix accurate scrutanda.

90. **Sarcochlamys**, *Gaudich. Voy. Bonite, t.* 89.—Flores dioici, tenuiter glomerato-spicati. Fl. ♂: Perianthium 5-partitum, segmentis membranaceis concavis leviter imbricatis, alabastro depresso. Stamina 5. Ovarii rudimentum parvum. Fl. ♀: Perianthium sub anthesi ovoideo-campanulatum, ore contracto inæqualiter 4-lobum, post anthesin uno latere gibboso-accretum ore sublaterali. Ovarium obliquum; stigma sessile, parvum, penicillatum; ovulum a basi erectum. Achænium obliquum, perianthio carnoso inclusum; pericarpium membranaceum. Semen conforme, testa crustacea (nisi endocarpio crustaceo adnata?); albumen vix ullum; cotyledones ovatæ.—Frutex. Folia alterna, petiolata, angusta, dentata, eleganter rugosa, 3-nervia, subtus nivea; stipulæ intrapetiolares, basi connatæ. Inflorescentiæ axillares, florum ♂ glomerulis secus ramos arcte sessilibus, spicas tenues plus minus interruptas formantes; flores ♀ densiores, secus ramos in spicas continuas irregulariter cylindraceas conferti.

Species 1, Indiæ orientalis et Peninsulæ Malayanæ incola. *Wedd. in DC. Prod.* xvi. i. 235[14]; *Monogr. t.* 16.

91? **Poikilospermum**, *Zipp.*; *Miq. in Ann. Mus. Lugd. Bat.* i. 203.—Flores dioici, capitato-cymulosi, cymulis laxe cymosis. Fl. ♂: Perianthium 4-partitum, segmentis apice inflexis subvalvatis, alabastro depresso-globoso. Stamina 4. Ovarii rudimentum parvum. Fl. ♀ (nobis non visi): Perianthium obconico-subcampaniforme, ore minutissimo 4-denticulatum, ovarium arcte includens, fructiferum carnosum, achænii basin cupulæ specie amplectens. Stigma sessile, capitellato-peltatum, minute papillosum; ovulum a basi erectum. Achænium e perianthio persistente carnoso exsertum, epicarpio carnosulo, endocarpio subcrustaceo. Semen conforme, albuminosum.—Frutex? ramis novellis adpresse pubescentibus. Folia alterna, magna, petiolata, integerrima, pennivenia et basi subtrinervia; stipulæ intrapetiolares, deciduæ. Inflorescentiæ ad axillas v. nodos defoliatos breviter pedunculatæ, ♂ dichotome cymosæ ramosissimæ densiores et breviores quam ♀. Bracteæ ovatæ, coloratæ, sub axibus primariis diutius persistentes. (*Char. fl.* ♀ *et inflorescentiæ ex Miq.*)

Species 1, Amboinensis, *Wedd. in DC. Prod.* xvi. i. 235[15], a Weddellio non visa et nobis e specimine imperfecto non satis nota, ulterius cum *Conocephalo* comparanda.

92. **Neraudia**, *Gaudich. in Freyc. Voy. Bot.* 500, *t.* 117, *et Voy. Bonite*, *t.* 133.—Flores dioici, glomerulis dense capitatis ad axillas sessilibus. Fl. ♂: Perianthium 4-partitum, segmentis acutis valvatis, alabastro ovoideo v. acuminato. Stamina 4. Ovarii rudimentum longe lanatum. Fl. ♀: Perianthium tubulosum, basi ventricosum, apice attenuatum, ore contracto sub-4-dentato, fructiferum plus minus auctum carnosum. Ovarium rectum, inclusum; stigma lineare, supra ovarium articulatum, villosum, deciduum nisi in ore perianthii retentum; ovulum a basi erectum. Achænium perianthio carnosulo arcte inclusum, depressum, basi circumcirca incrassatum v. in lobulos seu cornua 4 dilatatum; epicarpium carnosulum, endocarpium crustaceum. Seminis testa endocarpio adnata; albumen parcum; cotyledones ovatæ.—Frutices, teste Gaudichaudio lactescentes. Folia alterna, petiolata, integerrima, 3-nervia, supra interdum creberrime punctulata, cystolithis parum conspicuis; stipulæ parvæ, intrapetiolares. Florum capitula utriusque sexus ad axillas solitaria, arcte sessilia.

Species v. varietates insignes 2 v. 3, insularum Sandwicensium incolæ. *Wedd. in DC. Prod.* xvi. i. 235[16]; *Monogr. t.* 12.

Folia variant subtus sericea v. fere glabra, creberrime punctulata v. epunctata. Perianthium fructiferum nunc valde auctum circa achænium laxum, nunc minus auctum achænio maturo subappressum. Flores ♂ in alabastro obtusiusculi v. acuminati. Achænia basi 4-cornuta v. annulo continuo cincta, sed ex speciminibus nostris species bene limitatas distinguere nequimus.

93. **Pipturus**, *Wedd. in Ann. Sc. Nat. ser.* 4, i. 196, *et in DC. Prod.* xvi. i. 235[10]; *Monogr. t.* 15. (Nothocnide, *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 14. Praetoria, *Baill. Etud. Euph.* 470, *t.* 11.)—Flores dioici v. rarius monoici, dense globoso-glomerati. Fl. ♂: Perianthium 4–5-fidum, lobis ovatis acutis valvatis. Stamina 4-5. Ovarii rudimentum lanatum. Fl. ♀: Perianthium ovoideum, apice attenuatum, ore contracto minute dentato, fructiferum tenuiter carnosulum. Ovarium inclusum, perianthio adhærens; stigma lineare, exsertum, uno latere villosum, deciduum; ovulum a basi erectum. Receptaculum sub fructibus globosum, leviter carnosum v. siccum, sæpe villosulum. Achænium perianthio parum aucto herbaceo v. carnosulo arcte inclusum, a quo tamen sæpius liberum; pericarpium rigide membranaceum v. tenuiter crustaceum. Semen conforme, testa tenuiter membranacea; albumen perparcum; cotyledones latæ.—Arbores fruticesve elati, rarius scandentes. Folia alterna, integerrima v. crenato-serrata, 3–5-nervia, subtus sæpe canescentia; stipulæ in unam intrapetiolarem bifidam coalitæ, caducissimæ. Florum glomeruli nunc ad axillas sessiles solitarii, nunc spicati, secus rhachin simplicem v. ramosam dissiti sessilesque. Bracteæ minimæ.

Species 8, insularum Mascarensium Archipelagi Malayani et maris Pacifici et Australiæ incolæ. *Benth. Fl. Austral.* vi. 185.

94. **Villebrunea**, *Gaudich. Voy. Bonite, Bot. t.* 91, 92. (Oreocnide, *Miq. Pl. Jungh.* i. 39.)—Flores dioici, dense capitato-glomerati, receptaculo fructifero parvo. Fl. ♂: Perianthium 4-partitum, segmentis ovatis acutis valvatis v. vix imbricatis, alabastro subgloboso. Stamina 4. Ovarii rudimentum obovato-clavatum. Fl. ♀: Perianthium tubulosum, ovario adnatum, ore contracto minute dentato. Stigma sessile, parvum v. discoideum, margine longe ciliato-penicillatum; ovulum a basi erectum. Achænium perianthio tenuiter carnosulo arcte adnatum; pericarpium subcrustaceum. Semen rectum, sæpe acuminatum, testa tenuiter membranacea; albumen varium; cotyledones ovatæ v. latæ. —Arbores fruticesve. Folia alterna, petiolata, integerrima v. crenulata, penninervia v. 3-nervia; stipulæ in unam intrapetiolarem bifidam connatæ. Florum glomeruli seu capitula parva, solitaria, v. plura in cymam dichotomam laxiusculam disposita. Bracteæ sub capitulis parvæ v. breviter lineares; bracteolæ (?) intra capitulum sæpe nec semper sub fructu auctæ, in cupulam crasso-carnosam integerrimam interdum fructum ipsum æquantem accretæ.

Species ad 8, Indiæ orientalis, Archipelagi Malayani et Asiæ orientalis usque ad Japoniam incolæ. *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 15. *Wedd. in DC. Prod.* xvi. i. 235[9]; *Monogr. t.* 15.

V. rhodopleura, Bl., ex specimine Zippeliano videtur *Debregeasiæ* species vix a *D. velutina* distincta.

95. **Debregeasia**, *Gaudich. Voy. Bonite, t.* 90. (Morocarpus, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. 94.)—Flores monoici v. dioici, dense glomerato-capitati, receptaculo ♀ leviter carnoso-incrassato. Fl. ♂: Perianthium 4-partitum, rarius 3- v. 5-partitum, segmentis ovatis valvatis v. apice leviter imbricatis, alabastro depresso-globoso. Stamina 4, rarius 3 v. 5. Ovarii rudimentum glabrum v. basi lanatum. Fl. ♀: Perianthium ovoideum v. obovoideum, ore contracto minutissime dentato, fructiferum succulentum. Ovarium rectum, inclusum; stigma sessile v. in *D. Wallichiana* stylo distincto fultum, pilis paucis v. brevibus mox evanidis penicillatum; ovulum a basi erectum. Achænium perianthio succulento arcte inclusum eique subadnatum; pericarpium crustaceum, demum sæpe solutum. Semen conforme, testa membranacea; albumen copiosum v. parcum; cotyledones parvæ, latæ.—Frutices. Folia alterna, petiolata, serrato-crenata, 3-nervia, rugosa, subtus sæpissime nivea v. cinerea; stipulæ in unam intrapetiolarem 2-fidam connatæ. Florum glomeruli globosi, ad axillas v. nodos defoliatos in *D. hyalina*, Wedd., arcte sessiles, in *D. velutina*, Gaud., in cymas sessiles breviter dichotomas dispositi, in *D. Wallichiana* in cymas laxas longe pedunculatas. Bracteæ in glomerulis ♂ scariosæ.

Species 5, Abyssiniæ, Indiæ orientalis, Archipelagi Malayani et Asiæ orientalis usque ad Japoniam incolæ. *Wedd. in DC. Prod.* xvi. i. 235[34]; *Monogr. t.* 14, 15. *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 16 (*Morocarpus*). *Wight, Ic. t.* 1959 (*Conocephalus*). *Ferr. et Galin. Voy. Abyss. t.* 17 (*Bœhmeria*).

LEUCOCNIDE, Miq. in Pl. Jungh. i. 36, species continet plures ab auctore ipso postea ad *Morocarpum* (*Debregeasiam*) v. ad *Leucosykem* relatas.

96. **Leucosyke,** *Zoll. et Mor. in Moritz. Verz. Pl. Zoll.* 76. (Missiessia, *Gaudich. Voy. Bonite, t.* 93.)—Flores sæpius dioici, globoso-glomerati v. capitati, receptaculo fructifero carnosulo. Fl. ♂: Perianthium 4–5-partitum, segmentis valvatis. Stamina 4–5. Ovarii rudimentum glabrum v. breviter lanatum. Fl. ♀: Perianthium cupuliforme, sæpius breve, 4–5-dentatum v. lobatum. Ovarium oblique ovoideum, sæpe compressum; stigma sessile, penicillatum v. longe papillosum; ovulum a basi erectum, 'micropyle sæpius infundibuliformi-ampliata fimbriataque et summo loculo cohærente' (*Wedd.*). Achænium perianthio persistenti vix v. non aucto insidens, quo multo longius, ovatum, plus minus compressum; pericarpium crustaceum, extus interdum tenuissime carnosulum. Semen conforme, testa tenuiter membranacea; albumen parcum; cotyledones ellipticæ. —Arbusculæ v. frutices. Folia alterna, sæpe disticha, petiolata, crenato-serrata v. vix integerrima, 3-nervia, subtus canescentia; stipulæ in unam intrapetiolarem 2-fidam v. fere integram nunc maximam connatæ. Florum glomeruli globosi, ad axillas sessiles v. pedunculati, solitarii v. 2–4-ni, interdum brevissime racemosi nec cymosi. Bracteæ in glomerulis ♂ scariosæ.

Species 9, Archipelagi Malayani et insularum maris Pacifici australis incolæ. *Wedd. in DC. Prod.* xv. i. 235[28]; *Monogr. t.* 15 (*Missiessia*). *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 24 (*Touchardia*).

97. **Maoutia,** *Wedd. in Ann. Sc. Nat. ser.* 4, i. 193, *et in DC. Prod.* xvi. i. 235[30]; *Monogr. t.* 16. (Lecanocnide, *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 12.)—Flores monoici v. dioici, glomerato-capitati, receptaculo ♀ parvo. Fl. ♂: Perianthium 5-partitum, segmentis acutis valvatis v. vix apice inflexo-imbricatis, alabastro depresso-globoso. Stamina 4. Ovarii rudimentum dense lanatum. Fl. ♀: Perianthium ad basin ovarii minutum obliquum v. 0. Ovarium rectum; stigma parvum v. capitellatum, penicillatum, sessile v. stylo brevi fultum; ovulum a basi erectum. Achænium ovatum, compressum v. subtrigonum, perianthio minuto impositum v. omnino nudum; pericarpium crustaceum v. leviter induratum, extus interdum tenuissime carnosulum. Semen conforme, testa membranacea; albumen parcum; cotyledones ellipticæ v. oblongæ.—Frutices. Folia alterna, petiolata, crenato-serrata, 3-nervia, subtus nivea; stipulæ in unam intrapetiolarem 3-fidam connatæ. Florum glomeruli parvi, secus ramulos paniculæ axillaris sessiles v. ramulos terminantes. Bracteæ in glomerulis ♂ parvæ, scariosæ.

Species 8, Indiæ orientalis, Archipelagi Malayani et insularum maris Pacifici incolæ.

98. **Myriocarpa,** *Benth. Bot. Sulph.* 168, *t.* 55.—Flores dioici, rarius monoici, gracillime racemosi v. spicati. Fl. ♂: Perianthium 4–5-partitum (rarius 3-partitum, *Wedd.*), segmentis latis obtusis imbricatis. Stamina 4–5. Ovarii rudimentum glabrum, oblongum v. late peltatum. Fl. ♀: Perianthium 0, nisi bracteæ 2 sub ovario oppositæ additis interdum 2 minimis pro sepalis habendæ. Ovarium supra bracteas sessile v. breviter stipitatum, compressum; stigma oblique oblongum v. fere semilunare, villoso-papillosum, stylo conspicue fultum; ovulum a basi erectum. Achænium ovoideum, compressum, marginibus sæpe incrassatis; pericarpium tenuiter crustaceum. Semen conforme, testa tenuiter membranacea; albumen parcum; cotyledones ovatæ.—Arbusculæ v. frutices. Folia alterna, sæpius ampla, petiolata, dentata, pennivenia et sub-3-nervia, cystolithis circa pilorum bases v. rudimenta insigniter radiantibus; stipulæ intrapetiolares, in unam sæpe alte 2-fidam connatæ. Spicæ v. racemi ad axillas v. nodos defoliatos solitariæ v. subfasciculatæ, sæpius ramosæ. Flores secus rhachin ramosque filiformes interdum longissimos sparsi, ♂ sæpius sessiles denseque conferti, ♀ laxiores, sessiles v. pedicellati, sæpius numerosissimi. Ovaria et achænia pilis rigidulis hispida.

Species 6, Americæ tropicæ a Brasilia usque ad Mexicum incolæ. *Wedd. in DC. Prod.* xvi. i. 235[31]; *Monogr. t.* 16.

99. **Phenax**, *Wedd. in Ann. Sc. Nat. ser.* 4, i. 191, *in DC. Prod.* xvi. i. 235^{18}; *Monogr. t.* 16.—Flores monoici, rarius dioici, in axillis dense glomerati. Fl. ♂: Perianthium campanulatum, supra medium in lobos 4, rarius 3 v. 5, divisum, lobis latis sæpe inflexis valvatis v. leviter imbricatis, alabastro globoso v. apice truncato. Stamina 4, rarius 3 v. 5. Ovarii rudimentum subglabrum v. breviter lanatum, interdum basi cum basibus filamentorum in columnam brevem connatum. Fl. ♀: Perianthium 0 (ovario undique arcte adnatum, limbo nullo prominente, *Blume*). Ovarium intra bracteam sessile v. in stipitem brevem contractum, compressum; stigma elongatum, tenue, uno latere papillo-villosum, diu persistens; ovulum a basi erectum. Achænium compressiusculum; pericarpium tenuiter crustaceum v. submembranaceum. Semen conforme, testa membranacea; albumen parcum v. sat copiosum; cotyledones ovatæ.—Suffrutices v. frutices tenues, sæpe diffusi. Folia alterna, petiolata, crenata v. serrata, 3–5-nervia, sæpe rugosa; stipulæ liberæ. Florum glomeruli ad axillas arcte sessiles, bracteis ferrugineo-scariosis latis imbricatis; flores ♂ breviter pedicellati, ♀ subsessiles, singuli bracteis arcte inclusi.

Species 10, Americæ tropicæ incolæ, quarum una etiam in Mauritio et Malacca invenitur an inquilina? *Blume, Mus. Bot. Lugd. Bat.* ii. *t.* 54. *Jacq. Eclog. t.* 135 (*Bœhmeria*).

100. **Parietaria**, *Linn. Gen. n.* 1152. (Freirea *et* Thaumuria, *Gaudich. in Freyc. Voy. Bot.* 502.)—Flores polygami, ad axillas cymosi v. glomerati. Perianthium florum ☿ et ♂ alte 4-lobum, rarius 3-lobum, lobis valvatis, in flore ♀ basi evidentius tubulosum, lobis brevioribus. Stamina 4, rarius 3. Ovarium intra perianthium liberum, in flore ♂ rudimentum glabrum; stigma breviter v. rarius longius lineare, recurvum, dense penicillatum, sessile v. stylo fultum, deciduum; ovulum a basi erectum. Achænium perianthio persistente varie aucto sæpe cylindraceo herbaceo inclusum; pericarpium tenuiter crustaceum. Semen conforme, testa membranacea; albumen sat copiosum; cotyledones ovatæ v. oblongæ.—Herbæ annuæ v. perennes, sæpius diffusæ, pube sæpe e pilis hamatis præhensilibus. Folia alterna, petiolata, integerrima, 3-nervia v. triplinervia, sæpe parva; stipulæ 0. Florum cymulæ densæ v. glomeruli ad axillas sæpius gemini, sessiles. Bracteæ exteriores nunc basi plus minus in involucrum sub glomerulo 3- v. paucifloro connatæ, nunc in cymula laxiore varie connatæ v. liberæ, fructibus semper plus minus ex involucro protrusis.

Species ad 8, per regiones temperatas utriusque orbis late dispersæ, inter tropicos rariores, quarum plures inter se habitu simillimæ in herbariis valde confusæ. *Wedd. in DC. Prod.* xvi. i. 235^{12}; *Monogr. t.* 17. *Gærtn. Fruct. t.* 119. *Nees, Gen. Fl. Germ. Monochl. n.* 29. *Reichb. Ic. Fl. Germ. t.* 651. *Ledeb. Ic. Fl. Ross. t.* 22. *Sibth. Fl. Græc. t.* 154. *Delile, Fl. Ægypt. t.* 50. *Webb, Phytogr. Canar. t.* 214.

101. **Gesnouinia**, *Gaudich. in Freyc. Voy. Bot.* 502.—Flores monoici, fœmineus cum 2 masculis in involucro basi tubuloso, involucris glomeratis, glomerulis paniculatis. Fl. ♂: Perianthium 4-partitum, segmentis apice inflexis subvalvatis breviter acuminatis. Stamina 4. Ovarii rudimentum acuminatum, basi lanatum. Fl. ♀: Perianthium ovoideum, involucri tubo inclusum eique basi adnatum, breviter 4-dentatum. Ovarium rectum, inclusum; stigma lineare, stylo brevi fultum, uno latere papillosum; ovulum a basi erectum. Achænium perianthio et involucri tubo inclusum; pericarpium tenuiter membranaceum. Semen conforme, testa membranacea, vix a pericarpio solvenda; albumen tenue; cotyledones ovatæ.—Arbuscula patule ramosa, ramulis foliisque novellis canopilosis. Folia alterna, petiolata, majuscula, acuminata, integerrima, 3-nervia et pennivenia; stipulæ 0. Paniculæ in axillis superioribus ramosæ, floribundæ, interdum folia excedentes. Involucrorum glomeruli secus ramulos paniculæ dissiti, numerosi; involucra ipsa basi tubuloso-campanulata circa fructum leviter incrassata, lobis sæpius 6 angustis inæqualibus tubo longioribus.

Species 1, ins. Canariensium incola. *Wedd. in DC. Prod.* xvi. i. 235^{30}. *L'Hér. Stirp. Nov. t.* 20 (*Urtica*). *Webb, Phytogr. Canar. t.* 213 (*Parietaria*). *Jacq. Fragm. t.* 5 (*Bœhmeria*).

Species altera in Prodromo memorata, *Parietaria filamentosa*, Webb, Phytogr. Canar. t. 212, nobis tam habitu quam characteribus melius *Parietariæ* quam *Gesnouiniæ* convenire videtur.

Involucra 3-flora in aliis speciebus *Parietariæ* observantur, et flos ♀ et fructus e tubo involucri exsertus etiam in *P. filamentosa*. Stigma parum tantum longius et tenuius quam in flore ♀ *P. officinalis* a Weddellio in Monogr. t. 17, fig. 4, delineatur.

102. **Helxine,** *Req. in Ann. Sc. Nat. ser.* 1, v. 384. (Soleirolia, *Gaudich. in Freyc. Voy. Bot.* 504; *Voy. Bonite, t.* 114.)—Flores monoici, in axillis solitarii. Fl. ♂: Involucrum sub flore e bracteis 3 angustis. Calyx campanulatus, semi-4-fidus, lobis acuminatis valvatis, alabastro depresso. Stamina 4. Ovarii rudimentum parvum, lanatum. Fl. ♀: Involucri bracteæ in tubum plus minus connatæ, acuminatæ, dorso carinatæ v. fere alatæ ciliatæque. Perianthium involucro inclusum, tubulosum, breviter et anguste 4-fidum. Ovarium rectum; stigma penicillatum, stylo brevi fultum; ovulum a basi erectum. Achænium ovatum, nitidum, perianthio involucroque inclusum; pericarpium tenuiter crustaceum. Semen conforme, testa membranacea; albumen tenue; cotyledones ovatæ. —Herba tenella, diffuse ramosissima, basi repens, ramis filiformibus. Folia alterna, parva, integerrima, rotundata; stipulæ 0. Involucra ad axillas breviter pedicellata v. subsessilia, superiora mascula, inferiora pauca fœminea.

Species 1. Corsicæ et Sardiniæ incola. *Wedd. in DC. Prod.* xvi. i. 235[31]; *Monogr. t.* 18. *Viv. App. Fl. Cors.* 7, *f.* 1 (*Parietaria*).

103. **Rousselia,** *Gaudich. in Freyc. Voy. Bot.* 503; *Voy. Bonite, t.* 98.—Flores monoici, ad axillas ♂ racemulosi, ♀ gemini 2-bracteati. Fl. ♂: Perianthium 4-partitum, segmentis acutis valvatis, alabastro globoso. Stamina 4. Ovarii rudimentum basi lanatum. Fl. ♀: Perianthium ovatum, ore contracto 2–4-dentato. Ovarium rectum; stigma filiforme, curvulum, uno latere papilloso-plumosum; ovulum a basi erectum. Achænium compressum, ovatum, acutum, nitidum, perianthio aucto bracteaque vestitum; pericarpium fragile. Semen conforme, testa membranacea; albumen parcum; cotyledones ovatæ. —Herba perennis, tenera, diffusa, ramosissima; habitu *Parietariæ*. Folia alterna, parva, late ovata, integerrima, paucivenia et subtrinervia; stipulæ parvæ, liberæ. Cymulæ ♀ 2-floræ, ad axillas sessiles; bracteæ 2, latæ, foliaceæ, inter se liberæ sed demum floribus arcte adnatæ. Pedunculus ♂ ex eadem axilla, in speciminibus nostris vix floribus ♀ longior, apice racemulum fere in umbellam contractum pauciflorum ferens, floribus minimis breviter pedicellatis, singulis bractea parva lineari subtensis.

Species 1, Indiæ occidentalis incola. *Wedd. in DC. Prod.* xvi. i. 235[34]; *Monogr. t.* 18. Racemulum masculum laxum qualem a Gaudichaudio delineatur non vidimus, brevissimum invenimus ut a Weddellio depictum, sed ex iisdem axillis quam flores fœminei.

104. **Hemistylis,** *Benth. Pl. Hartw.* 123.—Flores monoici, ♂ glomerato-spicati, ♀ gemini, bracteis 2 involucrati. Fl. ♂: Perianthium 4-partitum, segmentis acutis valvatis, alabastro subgloboso. Stamina 4. Ovarii rudimentum parvum, glabrum v. basi lanatum. Fl. ♀: Perianthium ovoideum, ore contracto 2–4-dentato, fructiferum compressum, 2-carinatum v. 2-alatum. Ovarium inclusum; stigma filiforme, curvum, breviter papillosum, deciduum; ovulum a basi erectum. Achænium perianthio aucto arcte inclusum cui basi sæpe accretum, ovoideo-conicum; pericarpium nitidum fragile. Semen conforme, testa membranacea; albumen tenue; cotyledones latæ.—Arbusculæ v. frutices. Folia alterna, longe petiolata, lata, integerrima v. dentata, 3-nervia; stipulæ liberæ. Spicæ ad axillas solitariæ v. geminæ, rhachi pro maxima parte glomerulis ♂ numerosis confertis obtecta, bracteis sub glomerulis parvis. Involucra ♀ prope basin spicæ sæpius pauca, subsessilia, e bracteis 2 latis basi sæpe connatis et utrinque segmento anguste auctis composita; flores intra bracteas gemini, sessiles, nunc distincti bracteolis parvis stipati, nunc arcte contigui perianthiis fructiferis connatis. In una specie involucra ♀ numerosa, spicis a ♂ distinctis paniculatis.

Species 4, Colombianæ. *Wedd. in DC. Prod.* xvi. i. 235[32]; *Monogr. t.* 18.

Genus *Bœhmerieas* cum *Parietarieas* arcte connectens, forte melius inter priores recensendum. Habitus *Bœhmeriæ* ipsius.

105. **Forskohlea,** *Linn. Mant. n.* 1262. (Forskalea, *Juss. Gen.* 403. Caidbeja,

Forsk. Fl. Æg. Arab. 82.)—Flores monoici, intra involucrum tubuloso-campanulatum 3–6-partitum aggregati, lana densa involuti. Fl. ♂ in ambitu involucri ∞ : Perianthium in alabastro clavatum, per anthesin hinc fissum irregulariter 3-lobum v. 3-dentatum, lobo terminali inflexo. Stamen 1. Ovarii rudimentum 0. Fl. ♀ in centro involucri 1–5 : Perianthium 0. Ovarium rectum ; stigma filiforme, papilloso-hispidum, diu persistens ; ovulum a basi erectum. Achænia involucro inclusa, lana involuta, ovata, compressa ; pericarpium crassiusculum. Semen conforme, testa membranacea ; albumen parcum v. 0 ; cotyledones latæ.—Herbæ basi interdum lignescentes, tenues, pube rigida sæpius incana scaberrimæ. Folia alterna, dentata, triplinervia, subtus sæpe incana ; stipulæ laterales, liberæ. Involucra ad axillas sæpius plura, extus longe sericeo-pilosa, bracteis nunc a basi liberis nunc breviter connatis. Flores ♂ pedicellati, ex involucro sæpius breviter prominentes, ♀ sessiles arcte inclusi.

Species 5, inter se non semper facile distinguendæ, Africæ totius, Arabiæ et Indiæ orientalis provinciarum occidentalium incolæ, etiam in Hispania australi obviæ. *Wedd. in DC. Prod.* xvi. i. 235[36]; *Monogr. t.* 19. *Jacq. Hort. Vind. t.* 48. *Webb, Otia Hisp. t.* 44.

106. **Droguetia,** *Gaudich. in Freyc. Voy. Bot.* 505; *Voy. Bonite, t.* 114.—Flores monoici, in involucro late campanulato dentato aggregati. Fl. ♂ in ambitu involucri ∞ : Perianthium in alabastro clavatum, per anthesin hinc fissum et inæqualiter 3-lobum v. 3-dentatum. Stamen 1. Ovarii rudimentum 0. Fl. ♀ in centro involucri 1 v. pauci : Perianthium 0. Ovarium rectum ; stigma filiforme, papilloso-hispidum, diu persistens ; ovulum a basi erectum. Achænia involucro inclusa, lanata v. nuda, ovata, compressa ; pericarpium crassiusculum. Semen conforme, testa membranacea ; albumen varium ; cotyledones ellipticæ.—Herbæ quam in *Forskohlea* teneriores, virides v. scabro-pubescentes. Folia ovata, serrata, triplinervia ; stipulæ laterales, liberæ. Involucra quam in *Forskohlea* sæpius minora, tomento brevi scabro pubescentia, ad axillas foliorum v. bractearum solitaria v. plura conferta, subsessilia. Flores intra involucrum sessiles.

Species 4, Africæ tropicæ et australis Madagascariæ et Indiæ orientalis incolæ. *Wedd. in DC. Prod.* xvi. i. 235[37] ; *Monogr. t.* 19.

Genus *Forskohleæ* nimis affine, in sectiones 2 distinctissimas dividitur :—

1. *Didymogyne*, foliis oppositis, involucris omnibus axillaribus interdum geminis pluribusve. Species Africanæ et Indicæ *Forskohleæ* arcte affines. *Wight, Ic. t.* 1982 (*Forskohlea*). Didymogyne, *Wedd. in Ann. Sc. Nat ser.* 4, i. 207.

2. *Eudroguetia*, foliis alternis, involucris in axillis solitariis superioribus v. omnibus in spicam terminalem dispositis, foliis floralibus ad bracteas parvas reductis. Species 2, Mascarenses, *D. leptostachya*, Wedd. (foliis lapsu calami oppositis dictis), et *D. Thouarsiana*, Gaud. Voy. Bonite, t. 86, 87.

107. **Australina,** *Gaudich. in Freyc. Voy. Bot.* 505.—Flores monoici, ad axillas glomerati, exinvolucrati. Fl. ♂ : Perianthium clavatum, hinc fissum v. irregulariter dentatum, demum sæpe explanatum bracteiforme. Stamen 1. Ovarii rudimentum 0. Fl. ♀ : Perianthium ovato-tubulosum, ore contracto obscure dentato. Ovarium inclusum, rectum ; stigma lineare, sæpe breve, uno latere villosum v. fere penicillatum, persistens v. evanidum ; ovulum a basi erectum. Achænium perianthio parum aucto crassiuscule membranaceo v. fere carnosulo arcte inclusum, eique interdum adhærens ; pericarpium tenue, nitidulum. Semen conforme, testa tenuiter membranacea pericarpio subadhærente ; albumen perparcum ; cotyledones ovatæ.—Herbæ diffusæ, annuæ v. perennes. Folia alterna, petiolata, dentata v. minora subintegerrima ; stipulæ laterales, liberæ. Florum glomeruli in axillis sessiles, unisexuales v. androgyni ; bracteæ 1–2 exteriores interdum majores latioresque sed vix involucrum formantes.

Species ad 5, Australiæ et Africæ australis incolæ. *Wedd. in DC. Prod.* xvi. i. 235[38]; *Monogr. t.* 20. *Benth. Fl. Austral.* vi. 189.

Didymodoxa, *E. Mey. MS.*, species Africanas annuas continet quas ab Australianis perennibus generice distinguit Weddell in DC. Prod. xvi. i. 235[41] ; et Monogr. 547 t. 20, ob glomerulos androgynos et flores ♂ perianthio destitutos. Glomeruli tamen etiam in Australianis sæpe androgyni sunt, et

perianthium verum nobis adesse videtur in Capensibus. Flores fructusque plures in speciminibus Dregeanis et Burchellianis examinavimus, et ovarium intra perianthium stigmate coronatum vidimus, perianthio ipso interdum acumine brevi nec stylo coronato.

A. flaccida, Wedd., ex Abyssinia, foliis oppositis videtur potius *Droguetiæ* species, *D. pauciflora* affinis, sed flores in speciminibus nostris haud perfecti.

TRIBUS VIII. THELYGONEÆ.

108. **Thelygonum,** *Linn. Gen. n.* 1068 (Theligonum). (Cynocrambe, *Gærtn. Fruct.* i. 362, *t.* 75.)—**Flores monoici, ad axillas 1–3-ni. Fl. ♂ : Perianthium in alabastro globosum membranaceum clausum, per anthesin valvatim 2-partitum, segmentis patentibus latis 5-nervibus. Stamina in centro floris ∞ (sæpius 7–12, ex A. DC. 2–20), filamentis liberis filiformibus; antheræ jam in alabastro erectæ, lineares, prope basin dorsifixæ. Ovarii rudimentum 0. Fl. ♀ : Perianthium membranaceum, valde oblique lageniforme, tubo basi circa ovarium globoso, fere a basi uno latere in collum ascendens tubulosum basi constrictum apice minute 2–4-dentatum producto. Staminodia 0. Ovarium tubo globoso inclusum, basi prope collum perianthii affixum, stylus basilaris, e collo perianthii exsertus, filiformis, fere a basi papilloso-pilosulus; ovulum a basi erectum, mox a stylo averse incurvum, micropyle terminali. Nux subglobosa, perianthii tubo tenuissime membranaceo (interdum adnato v. deliquescente) inclusa, collo marcescente v. demum evanescente; pericarpium tenuiter crustaceum. Semen sessile, a basi erectum, ambitu pericarpio conforme sed valde curvum sinu a latere inferiore profunde intruso hippocrepiforme v. quasi 2-lobum; testa tenuiter membranacea, dorso pericarpio subadhærens, in latere inferiore seminis et intra sinum laxior; albumen dense carnosum, semini conforme; embryo in centro albuminis pariter curvus, albumine paullo brevior, cotyledonibus planis ellipticis sibimet applicitis, radicula incumbenti-incurva a basi seminis aversa.—Herba annua, procumbens, ramosa, carnosula. Folia inferiora opposita, superiora defectu unius cujusve paris alterna, breviter petiolata, ovata, integerrima, succulenta; stipulæ liberæ. Florum cymulæ sessiles, folio oppositæ (ad axillam folii oppositi abortientis). Flores ♂ 2–3-ni, subsessiles, ebracteolati, mox caduci, ♀ ex eodem v. diverso nodo 1–3-ni, v. in axillis gemini, pedicellis brevibus obconicis post anthesin calloso-incrassatis fulti, bracteolis 2 stipati, sub anthesin minuti. Nuces maturæ vix lineam excedunt diametro.**

Species 1, per regionem Mediterraneam late dispersa. *A. DC. Prod.* xvii. 33 (*Cynocrambe*). *Nees, Gen. Fl. Germ. Monochl. n.* 69. *Caruel in Nuov. Giorn. Bot. Ital.* v. 165, *t.* 1. *Sibth. Fl. Gr. t.* 941. *Delile in Ann. Sc. Nat. ser.* 1, xix. 370, *t.* 13.

Genus olim ob stationem sæpe maritimam et habitum carnosulum *Chenopodiaceis* adscriptum, sed florum et præcipue seminum structura longe distat, a nonnullis pro ordine proprio habetur. In omnibus tamen cum tribu *Urticearum* convenit, exceptis staminibus indefinitis erectisque, quæ præterea in sola *Ampelocera* e tribu *Celtidearum* observantur, et embryone curvo, in tribu *Celtidearum* constante, in *Moreis* minus frequente, in *Urticeis* nondum noto.

De foliorum dispositione et evolutione confer Irmisch in Flora 1856, 689. Delile l.c. cystolithos in exocarpio observatos descripsit sub nomine *aiguilles crystallines*. Hic auctor flores fœmineos dixit masculis præcociores; contra, ex Caruel, qui pariter plantam vivam in loco natali observavit, flores fœminei post masculos delapsos in eadem axilla evolvuntur.

Ordo CLIV. PLATANACEÆ.

Endl. Gen. 289. Lindl. Veg. Kingd. 272.

Flores monoici, in capitulis unisexualibus globosis densissime conferti, receptaculo carnoso impositi. *Perianthium* 0. Capitula ♂: *Antheræ* numerosæ, in receptaculo subsessiles, singulæ squamella minuta subtensæ, oblongæ v. fere lineares, loculis 2 parallelis dorso appositis longitudinaliter dehiscentibus, connectivo apice peltato superatis. Capitula ♀: *Carpella* numerosa, omnia distincta at sæpe per 2–8 obscure fasciculata, subsessilia, bracteolis linearibus v. brevibus hinc inde intermixta. *Ovarium* lineare, 1-loculare, in stylum elongatum superne uno latere stigmatosum productum. *Ovulum* 1 (v. rarius 2 uno abortiente), ex apice loculi pendulum, orthotropum. *Capitula fructifera* aucta cæterum florentibus similia. *Carpella* singula basi linearia pilis longis circumdata, superne calloso-incrassata, sigillatim decidua, indehiscentia. *Semen* in carpello unicum, pendulum, lineare, testa membranacea. *Albumen* in seminibus examinatis tenue (interdum deficere dicitur). *Embryo* linearis, rectus, cotyledonibus sibimet applicitis vix radicula infera latioribus eique subæquilongis.

Arbores cortice sæpius in squamas latas quotannis deciduo. Folia alterna, petiolata, lata, palmatinervia lobataque, petiolo basi dilatato gemmam includente. Stipulæ membranaceæ, caducæ. Florum capitula secus pedunculum terminalem v. e gemma laterali oriundum pauca, sessilia, in eodem pedunculo unisexualia. Receptaculum utriusque sexus leviter foveolatum et minute squamellatum. Bracteolæ cæterum in capitulo ♂ 0, in capitulo ♀ sub fasciculis v. interdum sub floribus singulis lineares, floribus æquilongæ v. breviores, in capitulo fructifero sæpius evanidæ (an exsiccatæ an delapsæ incertum est).

Species 5–6, regionum temperatarum v. subtropicarum hemisphærii borealis utriusque orbis incolæ, quarum 2 Europææ orientales v. Asiaticæ, 2 Americanæ.

Ordo e genere unico constans nulli arcte proximus, etsi pluribus notis *Urticaceis* conveniat. Inflorescentia *Artocarpearum* et *Morearum* nonnullarum. Ovulum orthotropum, albumen perparcum, et embryo *Conocephalearum* et *Urticearum*, sed micropyle et radicula infera ab omnibus *Urticaceis* distat. Ab *Hamamelideis* (*Altingia*), quacum nonnulli comparant, multo longius recedit ovario, fructu, seminibus, aliisque notis. Observationes B. Clarkii in Ann. Nat. Hist. ser. 3, i. 103, t. 6, nequaquam confirmare possumus. Nec perianthii segmenta nec bracteolas inter antheras capituli ♂ invenimus, et rarissimo hinc inde anthera imperfecta interposita est. Flores ♀ obscure fasciculati ut in *Artocarpeis* globoso-capitatis, ubi capitula e cyma contracta formata videntur, et bracteola sæpe sub fasciculo adest, sed perianthium a Clarkio depictum nunquam vidimus, nec invenire potuit Eichler (Bluthendiagr. ii. 66).

1. **Platanus**, *Linn. Gen. n.* 1075.—Genus unicum. Character ordinis.

Species, uti supra, 5–6. *A. DC. Prod.* xvi. ii. 159. *Nees, Gen. Fl. Germ. Monochl. n.* 17. *Sibth. Fl. Græc. t.* 945. *Wats. Dendrol. Brit. t.* 100, 101. *Mich. N. Amer. Sylv. t.* 63. *Nutt. N. Amer. Sylv. t.* 15. *Moric. Pl. Nouv. Amer. t.* 26.

Ordo CLV. LEITNERIEÆ.

Flores dioici, utriusque sexus in spicis amentaceis erectis sub quaque bractea solitarii. Fl. ♂: *Perianthium* 0. *Stamina* ∞ (3–12), toro basi bracteæ adnato affixa, filamentis filiformibus liberis v. vix basi connatis. *Antheræ* majusculæ, erectæ, basifixæ, loculis parallelis distinctis dorso contiguis longitudinaliter dehiscentibus. *Ovarii* rudimentum 0. Fl. ♀: *Perianthium* minutum e squamellis valde inæqualibus basi in discum seu cupulam connatis. *Ovarium* sessile, 1-loculare, in stylum longum indivisum apice recurvum uno

latere longe stigmatosum desinens. *Ovulum* unicum, parieti lateraliter affixum, amphitropum, ascendens, micropyle supera. *Drupa* oblonga, compressiuscula, exocarpio tenui; endocarpium durum. *Semen* hilo lineari lateraliter affixum, fructui conforme, testa membranacea. *Albumen* tenue, carnosum. *Embryo* rectus, semine parum brevior, cotyledonibus planis basi cordatis, radicula brevi exserta supera.

Frutices non resinosi, innovationibus sericeo-puberulis. Folia alterna, petiolata, majuscula, integerrima, pennivenia, epunctata. Stipulæ 0. Amenta e ramis annotinis ante folia evoluta, in gemmis solitaria, sessilia, squamis seu bracteis imbricatis demum laxiusculis, inferioribus plurimis vacuis.

Species 2, altera Floridana paludosa, altera Texana minus perfecte nota.

1. **Leitneria,** *Chapm. Fl. S. U. St.* 427.—Genus unicum. Character ordinis.

Species, uti supra, 2. *Cas. DC. Prod.* xvi. ii. 154. *Hook. Ic. Pl. t.* 1044. *Baill. Hist. Pl.* vi. 239, fig. 214 ad 216.

Genus dubie *Myricaceis* adscriptum, nobis potius *Urticaceis* affine videtur, quoad flores ♂ *Juglandeas* refert, sed habitu, perianthio ♀ infero, etc., distincte differt.

Didymeles, *Thou. Hist. Veg. Afr. Austr.* 9, *t.* 1 (*vel* 3), arbor Madagascariensis a botanicis recentioribus non observata, a Baillonio primum ad *Rutaceas* dubie relata, serius Hist. Pl. vi. 241. *Leitneriæ* juxtaposita, ex charactere et icone auctoris nobis ab utroque aliena videtur sed affinitas valde dubia.

Ordo CLVI. JUGLANDEÆ.

Endl. Gen. 1125. Lindl. Veg. Kingd. 292.

Flores monoici, masculi sæpius in spicis amentaceis laxis pendulis, fœminei v. rarius utriusque sexus in spicis erectis, ad quamquam bracteam solitarii, sessiles. Fl. ♂ bracteæ adnati: *Perianthium* e lobis 3–6 ad bracteæ margines, v. extremo intra apicem bracteæ libero, v. perianthium 0, toro bracteæ adnato. *Stamina* ∞ (3–40), toro sæpius lineari 2-∞-seriatim affixa, filamentis brevibus. *Antheræ* erectæ, ovatæ v. oblongæ, loculis parallelis distinctis dorso contiguis, rima longitudinali dehiscentibus, connectivo apice clavato v. dilatato v. undique tenui. *Ovarii* rudimentum rarius evolutum. Fl. ♀ in rhachi sessiles, varie bracteati, sæpeque 2-bracteolati: *Perianthium* ovario adnatum, apice breviter liberum, 4-dentatum v. breviter 4-lobum. *Ovarium* inferum, 1-loculare; stylus brevis, ramis 2 abbreviatis v. elongatis introrsum continue a basi stigmatosis sæpe fimbriato-plumosis. *Ovulum* 1, a basi erectum, orthotropum. *Fructus* drupaceus v. rarius nuceus, nunc bractea bracteolisque auctis basi v. alte adnatis varie involucratus, nunc bracteolis immutatis v. deciduis nudus; exocarpium carnosum v. succulentum, arcte adhærens v. demum varie solutum, rarius tenuissimum; endocarpium durum, osseum, v. rarius tenuius crustaceum, basi intrusum, fructum in loculos 2 v. 4 imperfectos dividens. *Semen* unicum, endocarpio intruso affixum, superne erectum subintegrum, basi in lobos 2 v. 4 in loculos spurios descendentes divisum, testa membranacea. *Albumen* 0. *Embryo* semini conformis, cotyledonibus nunc carnosis æqualibus v. rugosis nunc subfoliaceis intricate contortuplicatis, radicula supera.

Arbores sæpe magnæ, ligno duro, succo aqueo v. resinoso nec lacteo. Folia alterna, sæpius ampla, imparipinnata, foliolis integerrimis serratisve penniveniis sæpe obliquis v. falcatis. Stipulæ 0. Amenta ♂ e ramis annotinis v. ad basin innovationum lateralia; spicæ ♀ terminales, v. spicæ utriusque sexus ad apices ramulorum hornotinorum plures.

Species vix ultra 30, per regiones temperatas hemisphærii borealis in utroque orbe late dispersæ, etiam inter tropicos in montanis Asiæ et Americæ centralis obviæ.

Ordo bene distinctus, olim *Anacardiaceis* approximatus, involucro generis typici pro calyce descripto, perianthii lobis pro petalis, a botanicis aliis ob spicas masculas amentaceas cum *Cupuliferis*

aliisque in ordine *Amentacearum* inclusus, revera pluribus notis *Urticaceis* accedit, sed foliis pinnatis, fructu intus basi spurie 2–4-locellato, seminis lobis intra loculos descendentibus, ab omnibus affinibus facile separatur.

CONSPECTUS GENERUM.

* *Amenta ♂ pendula. Flores ♀ spicati v. subsolitarii.*

1. CARYA. Bractea sub fl. ♀ parva v. 0, bracteolæ 0. Drupæ exocarpium ab endocarpio lævi v. vix rugoso apice 4-valvatim secedens.—*Amer. bor., Mexico.*

2. JUGLANS. Bractea fl. ♀ bracteolis ovario arcte adhærens, sub perianthii limbum irregulariter dentata, perianthium exterius simulans. Drupæ exocarpium endocarpio rugoso arcte adhærens v. demum irregulariter solvendum.—*Eur., Asia med. et or., Amer. bor., Mexico, Ind. occid.*

3. PTEROCARYA. Bractea fl. ♀ basi ovario subadnata, sub fructu immutata; bracteolæ intra bracteam latæ ovario adnatæ. Drupa bracteolis auctis oblique adnatis 2-alata.—*Caucasus, China, Japonia.*

4. ENGELHARDTIA. Bractea fl. ♀ ima basi cupulata, ovario adnata, 3-loba, fructifera aucta, venosa, patens, 3-loba, lobo medio longiore, basi nucem fovens.—*Ind. or., Archip. Mal., China austr.*

** *Spicæ utriusque sexus erectæ, imbricato-bracteatæ.*

5. PLATYCARYA. Fl. ♀ ad basin bracteæ sessiles, ebracteolati. Spica fructifera strobiliformis, bracteis squamiformibus numerosis imbricatis nuces parvas sæpius 2-alatas obtegentibus. —*Japonia. China bor.*

1. **Carya,** *Nutt. Gen. Pl. Amer.* ii. 220. (Hicorias et Scorias, *Rafin. ex Endl. Gen. Pl.* 1126.)—Amenta ♂ lateralia, pendula. Perianthium cum bractea lineari concretum, irregulariter 2–3-lobum. Stamina ∞ (3–10), in receptaculo adnato sub-2-seriata; antherarum connectivum tenue, ultra loculos non productum. Ovarii rudimentum 0. Flores ♀ breviter v. interrupte spicati, sæpius pauci, bractea parva fugaci v. omnino deficiente exinvolucrati. Perianthium ovario adnatum; limbi lobi 4, breves æquales v. uno multo longiore. Ovarium et ovulum ad normam ordinis; styli rami undique stigmatosi papilloso-fimbriati, ad apicem ovarii subsessiles patentes. Drupa subsicca, ovoidea v. globosa, exocarpio (e perianthio adnato?) carnoso-coriaceo in valvas 4 superne dehiscente; endocarpium indehiscens, læve v. parum rugosum, cum laminis intrusis fructum plus minus in loculos 2–4 dividentibus, nunc crassum durissimumque, nunc tenuius fere crustaceum. Semen inferne 2–4-lobum; cotyledonibus carnosis sæpe rugosis, non tamen plicatis.—Arbores habitu *Juglandis.* Folia imparipinnata, foliolis serratis. Amenta ♂ ad basin innovationum in pedunculo communi brevi sæpissime terna, ternationibus interdum in ramulo numerosis. Spica ♀ terminalis, floribus nunc 6–10 dissitis, nunc 3–4 fere capitatis.

Species notæ 10, omnes boreali-Americanæ, quarum una usque ad Mexicum extensa. *Cas. DC. Prod.* xvi. ii. 142. *Gærtn. Fruct. t.* 89 (*Juglans*). *Mich. Arb. Amer. Sept.* i. *Ic. Jugl. t.* 3 *ad* 10. *Wats. Dendrol. Brit. t.* 148, 167. *Torr. Fl. N. York, t.* 100, 101. *Emers. Rep. Trees Massachus. t.* 12 *ad* 15.

2. **Juglans,** *Linn. Gen. n.* 1071, *pro parte.*—Amenta ♂ lateralia, pendula. Perianthium cum bractea lineari concretum, margine irregulariter 5–6-lobum. Stamina ∞ (8–40), toro lineari 2-∞-seriatim affixa; antherarum connectivum apice sæpius clavatum v. dilatatum, loculos tamen vix superans. Ovarii rudimentum 0. Flores ♀ in spica terminali pauci. Bractea cum bracteolis ovario alte adnatæ, involucrum adnatum (calycem auct. plur.), margine irregulariter 3–5-lobum v. dentatum formans. Perianthium (petala nonnullorum) intra involucrum ovario altius adnatum, limbo libero 4-dentato v. alte 4-fido, lobis imbricatis æqualibus v. uno paullo majore. Ovarium et ovulum ad normam ordinis; styli rami stigmatosi lineares v. lanceolati, recurvo-patentes, a basi fimbriato-plumosi. Drupa sæpius majuscula, globosa v. ovoidea, exocarpio carnoso indehiscente adhærente v. demum irregulariter fisso solutoque; endocarpium crassum, durum, extus rugosum,

intus basi spurie 2- v. 4-loculare. Semen basi 2- v. 4-lobum, cotyledonibus carnosis sæpius rugosis.—Arbores cortice odorato v. resinoso. Folia ampla, ∞-foliolata. Amenta ♂ e gemmis lateralibus paucisquamatis solitaria. Spicæ ♀ terminales, dissite pauciflore v. interdum ad florem unicum reductæ.

Species 7 v. 8, per hemisphærii borealis regiones temperatas v. subtropicas late dispersæ; 1 Europæa et Asiatica media, 2 ex Asia orientali et Japonia, 4 v. 5 Americanæ a Canada et California usque ad Indiam occidentalem et Mexicum extensæ. *Cas. DC. Prod.* xvi. ii. 135. *Maxim. in Bull. Acad. Petersb.* xviii. 58; *Mel. Biol.* viii. 630. *Hayne, Arzneig.* xiii. *t.* 17. *Jacq. Ic. Rar. t.* 191, 192. *Wats. Dendrol. Brit. t.* 158. *Nees, Gen. Fl. Germ. Monochl. n.* 27. *Mich. Arb. Amer. Sept.* i. *Jugl. t.* 1, 2. *Torr. Bot. Sitgr. Exped. t.* 15, 16.

Wallia, *Alefeld in Bonplandia*, 1861, 335, genus ad species Americanas propositum, ab auctore distinguitur exocarpio etiam maturo arcte adhærente, endocarpio extus rugosiore, laminis intrusis induratis nec ut in *J. regia* tenuibus, characteres perpauci momenti. Alefeld tamen nunquam *J. regiam* in *Wallia* inclusit ut errore in Prodromo citatur.

3. **Pterocarya,** *Kunth in Ann. Sc. Nat. ser.* 1, ii. 345.—Amenta ♂ lateralia, pendula. Perianthium cum bractea lineari v. spathulata concretum, margine irregulariter 3–6-lobum, lobo extremo sæpe intra bracteæ apicem libero. Stamina ∞ (9–18), toro lineari 2-seriatim affixa; antherarum connectivum tenue. Ovarii rudimentum lineare sæpe adest. Fl. ♀ longe spicatæ. Bracteolæ intra bracteam latæ, ovario plus minus adnatæ. Perianthium ovario adnatum, limbo libero breviter 4-fido. Ovarium et ovulum ad normam ordinis; styli rami stigmatosi lineari-oblongi, introrsum a basi dense papilloso-subplumosi. Bractea primaria sub fructu immutata. Drupa sicca, bracteolis valde auctis basi oblique adnatis fere ad apicem late v. longiuscule 2-alata, exocarpio tenui; endocarpium durum, intus varie intrusum, loculos 4 imperfectos irregularesque formans. Semen basi 4-lobum, cotyledonibus rugoso-plicatis sæpius intricato-contortuplicatis.—Arbores. Folia ampla, foliolis sæpius numerosis angustis. Amenta ♂ ad basin innovationum pauca. Spicæ ♀ longæ, tenues, ramulos breves 1–3-foliatos terminantes.

Species 3 v. 4, Asiæ temperatæ incolæ, quarum una Caucasica, cæteræ Chinenses v. Japonicæ. *Cas. DC. Prod.* xvi. ii. 139. *Oerst. in Vidensk. Meddel. Nat. Foren. Kjobenh.* 1870, 160, *t.* 1. *Maxim. in Bull. Acad. Petersb.* xviii. 63; *Mel. Biol.* viii. 637.

4. **Engelhardtia,** *Leschen. in Blume, Bijdr.* 528. (Pterilema, *Reinw. in Syll. Pl. Nov. Soc. Ratisb.* ii. 13.)—Amenta ♂ lateralia, pendula. Perianthium cum bractea lineari v. apice dilatata concretum, margine irregulariter 3–6-lobum, v. vix prominens. Stamina ∞ (3–15), toro 2-seriatim affixa; antherarum connectivum parum prominens. Ovarii rudimentum lineare sæpe adest. Flores ♀ longe laxeque spicati. Bractea ima basi brevissime cupulata et ovario adnata, 3–5-fida, lobo medio longiore lateralibus (bracteolis ?) parvis. Perianthium ovario adnatum, limbo libero brevi 4-fido, lobis subvalvatis. Ovarium et ovulum ad normam ordinis; styli rami stigmatosi 2–4, crassi, varie papilloso-fimbriati. Bractea sub fructu aucta, rigide membranacea, venosa, basi nucem amplectens eique adnata, superne alam 3–5-fidam patentem formans, lobo medio lateralibus multo longiore. Nux parva, endocarpio crustaceo v. indurato intus varie intruso, loculos 2–4 imperfectos irregularesque formante. Semen basi 2–4-lobum, cotyledonibus rugoso-plicatis sæpius intricato-contortuplicatis.—Arbores magnæ. Folia ampla, ∞-foliolata, subtus sæpe resinoso-punctatæ. Amenta ♂ e gemmis solitaria v. gemina, v. in pedunculo brevi ramoso plura. Spicæ fœmineæ ad basin innovationum laterales, v. paniculam masculam rarius ramulum foliatum terminantes, sæpius longæ, floribundæ, erectæ v. fructiferæ recurvæ.

Species genuinæ ad 10, Indiæ orientalis, Archipelagi Malayani v. Chinæ australis incolæ. *Cas. DC. Prod.* xvi. ii. 140. *Blume, Fl. Jav. Jugl.* i. 1 *ad* 5. *Wall. Pl. As. Rar. t.* 199, 208.

Oreomunnea, *Oerst. in. Vid. Meddel. Nat. Foren. Kjobenh.* 1856, 52 (Oreamunoa, *Oerst. l.c.* 1870, 166, *t.* 2), e Costa Rica Americæ centralis, apud Cas. DC. *Engelhardtiæ* sectionem format. Flores ♂ et folia adhuc ignota. Fructus ex ic. et descr. ei *Engelhardtiæ* similis est, sed multo major, ala 5-pollicari, styli rami stigmatosi brevissime crassi vertice hippocrepici et endocarpium intus multo magis divisum quam in *Engelhardtiis* Asiaticis.

5. **Platycarya,** *Sieb. et Zucc. in Abhandl. Akad. Wissensch. Münch.* iii. 741, *t.* 5; *Fl. Jap. t.* 149. (Fortunæa, *Lindl. in Journ. Hort. Soc.* i. 150.)—Spicæ utriusque sexus erectæ, imbricato-bracteatæ, interdum androgynæ, basi fœmineæ. Fl. ♂: Perianthium 0. Stamina ∞ (8–10), toro basi bracteæ sæpeque rhachi spicæ adnato affixa, antherarum connectivo tenui. Ovarii rudimentum lineare, interdum deficiens. Fl. ♀ ad basin bracteæ sessiles, ebracteolati: Perianthium ovario adnatum, apice 2–3-dentatum, dentibus parvis 2 lateralibus tertio dum adsit postico. Ovarium inferum, ovatum, a dorso compressum; stylus brevis, crassus, lobis stigmatosis patentibus. Spica fructifera strobiliformis, ovoidea v. oblonga, squamis v. bracteis rigidis acute acuminatis imbricatis nuces omnino obtegentibus. Nux ad basin bracteæ parva, compressa, angulis lateralibus acutis sæpius anguste alatis, et interdum facie postica angulo obtuso plus minus prominente instructa; exocarpium tenue; endocarpium crustaceum, duriusculum, intus basi laminis intrusis loculos 2 imperfectos formans. Semen basi 2-lobum; cotyledonibus plicatis.—Arbores. Folia ∞-foliolata, foliolis serrulatis. Spicæ ad apices ramulorum brevium foliatorum plures, centralis fœminea v. androgyna basi fœminea apice mascula, cæteræ 2–8 masculæ, omnes cylindraceæ, multifloræ.

Species 1, Japoniæ et Chinæ borealis incola. *Cas. DC. Prod.* xvi. ii. 145.

Ordo CLVII. MYRICACEÆ.

Endl. Gen. Pl. 271. Lindl. Veg. Kingd. 256.

Flores unisexuales, in spicis breviter cylindraceis squamoso-bracteatis sub bracteis sessiles. *Perianthium* 0, flores tamen præsertim ♀ bracteolis 2–4 rarius ∞, intra bracteam stipati. Fl. ♂: *Stamina* 2–∞ (usque ad 16, sæpius 4–6), toro basi bracteæ adnato imposita, filamentis brevibus liberis v. plus minus coalitis. *Antheræ* erectæ, ovatæ, loculis 2 distinctis parallelis longitudinaliter dehiscentibus, connectivo non producto. *Ovarii* rudimentum rarius adest subulatum. Fl. ♀ sub quaque bractea solitarii v. rarius 2–4-ni, sæpissime 2–4-bracteolati. *Ovarium* sessile, 1-loculare; stylus brevis, ramis 2 introrsum continue stigmatosis filiformibus v. rarius abbreviatis. *Ovulum* 1, a basi erectum, orthotropum. *Drupa* parva, globosa v. ovoidea, extus sæpius ceraceo-papillosa, exocarpio resinoso-carnoso v. succulento, endocarpio duro. *Semen* erectum, testa membranacea. *Albumen* 0. *Embryo* rectus, cotyledonibus carnosulis plano-convexis, radicula brevi supera.

Arbores fruticesve, sæpius aromatici. Folia alterna, penninervia, integerrima serrata irregulariter dentata v. lobata, v. regulariter pinnatifida. Stipulæ 0 (nisi in *M. asplenifolia* spuriæ). Spicæ ♂ in ramis annotinis sæpius densæ, squamis imbricatis ante foliorum evolutionem v. ad basin innovationum v. ad axillas foliorum solitariæ sessilesque, v. ∞ fasciculatæ spicatæ v. dense paniculatæ; interdum androgynæ masculis similes, floribus inferioribus ♂, superioribus ♀. Spicæ ♀ nunc masculis breviores, nunc longiores interruptæque, sæpius axillares.

Species ad 35, per totum fere orbem in regionibus temperatis calidioribusque latissime dispersæ, in Australia tamen adhuc non repertæ.

1. **Myrica,** *Linn. Gen. n.* 1107.—Genus unicum. Character ordinis.

Species, uti supra, ad 35. *Cas. DC. Prod.* xvi. ii. 147. *Gærtn. Fruct.* i. *t.* 39. *Nees, Gen. Fl. Germ. Monochl. n.* 26. *Reichb. Ic. Fl. Germ. t.* 620. *Jacq. Fragm. t.* 1. *Mirb. in Mém. Mus. Par.* xiv. *t.* 27, 28. *Wall. Tent. Fl. Nap. t.* 45. *Wight, Ic. t.* 764, 765. *Blum. Fl. Jav. Myric. t.* 1. *H. B. et K. Nov. Gen. et Sp. t.* 98.

Genus anomalum, olim *Amentaceis* ob inflorescentiam adscriptum, recedit tamen notis essentialibus floralibus carpicisque tam a *Cupuliferis* quam a *Salicineis*. Characteres plures *Juglandearum*, sed

habitus longe diversa, semen parvum minime lobatum, etc. In Prodromo sectiones 4 admissæ sunt, imprimis ex inflorescentia plus minus composita bracteolarumque numero distinctæ, characteres potius specifici quam sectionales v. omnino variabiles. *M. Gale*, Linn., species per regiones temperatas utriusque orbis dispersa, bene sectionem distinctam format (*Gale*), bracteolis floris ♀ per anthesin minimis post anthesin valde accretis fructu adnatis alæformibus et drupa squamam spicæ non v. vix superante. In cæteris omnibus speciebus (sect. *Morella*), bracteolæ sub fructu parvæ remanent et drupa globosa v. ovoidea e squamis spicæ longe exserta. Inter illas includuntur genera sequentia a variis auctoribus proposita: NAGEIA, *Gærtn. Fruct.* i. 191, quoad flores descriptos est verisimiliter *M. Nagi*, Thunb., *Bot. Mag. t.* 5727, species japonica v. chinensis, spicis ♂ simplicibus, sed stamina sub squamis inferioribus interdum ∞ bracteolis intermixta. Fructus a Gærtnero depictus est *Podocarpi* species. MORELLA, *Lour. Fl. Cochinch.* 548, ex charactere dato est *M. sapida*, Wall., species in India orientali Chinaque frequens sylvestris v. culta, spicis ♂ dense paniculato-ramosis insignis. COMPTONIA, *Banks, in Gærtn. Fruct.* ii. 58, *t.* 90; *Wats. Dendrol. Brit. t.* 166, est *M. asplenifolia*, Endl., species boreali-Americana foliis regulariter pinnatifidis, floribus ♀ 4-bracteolatis. In hac sola specie folia gemmam axillarem foventia 2-stipulata dicuntur. Stipulæ tamen vix normales videntur, nec petiolo nec cauli adnatæ sed utrinque inter petiolum et caulem sitæ, subulatæ sed basi auricula foliacea in caulem extus deflexa auctæ. Annon potius pro squamis prioribus gemmæ axillaris habendæ? Ad folia inferiora innovationum gemmis axillaribus destituta desunt, FAYA, *Webb. Phytogr. Canar.* iv. 272, *t.* 216, est *M. Faya*, Ait., species Canariensis et Maderensis, floribus ♀ sub quaque squama sæpius 3 arcte confertis v. subcoalitis, nec aliter a sectione *Morella* distincta.

GENERA EXCLUSA.

LEITNERIAM, Chapm., pro ordine proprio **Leitneriaceis** accepimus.
CLARISIA, Ruiz. et Pav., ad **Urticaceas** (*Artocarpeas*) refertur.

ORDO CLVIII. CASUARINEÆ.

Endl. Gen. 270. Lindl. Veg. Kingd. 249.

Flores unisexuales, masculi in spicis cylindraceis v. 4-gonis, fœminei in spicis strobilisv globosis v. ovoideis, utriusque sexus sub bracteis squamisve verticillatis solitarii, sessiles, 2-bracteolati. Fl. ♂: *Perianthii* segmenta 1 v. 2 (anticum et posticum), concava v. cucullata, basi circumscissa et staminis evolutione rejecta. *Stamen* 1, filamento in alabastro inflexo, per anthesin porrecto. *Anthera* majuscula, loculis distinctis dorso appositis longitudinaliter dehiscentibus. Fl. ♀: *Perianthium* 0. *Ovarium* minutum, 1-loculare; stylus brevis, ramis elongatis linearibus a basi continue stigmatosis. *Ovula* 2, semianatropa, supra basin collateraliter affixa, ascendentia, micropyle supera. *Fructus* in strobilum ovoideum v. cylindraceum e bracteis bracteolisque auctis induratis sæpius lignosis coalitis formatum conferti, bracteolis ante maturitatem supra nucem clausis, maturitate 2-valvatim apertis. *Nux* a latere compressa, lævis, apice in alam medio stylo percursam producta, indehiscens. *Semen* abortu unicum, lateraliter affixum, testa membranacea. *Albumen* 0. *Embryo* rectus, cotyledonibus complanatis æqualibus, radicula brevi supera.

Arbores fruticesve, ramis ramulisque aphyllis rigidis erectis v. pendulis plerisque deciduis, cylindraceis verticillatisque v. 4-gonis sparsisque, ad nodos sæpius articulatis. Squamellæ loco foliorum ad nodos 4–∞, verticillatæ, parvæ, appressæ, interdum breviter in vaginam connatæ, costis decurrentibus angulos caulis formantibus, squamellis cujusve nodi cum illis nodi inferioris alternis. Spicæ ♂ simplices v. compositæ, ramulos sæpius deciduos terminantes, ♀ in ramis persistentibus terminales v. laterales.

Species notæ 23, pleræque Australiæ v. Novæ Caledoniæ incolæ, 4 in Archipelago Malayano crescentes quarum una per Asiam tropicam, ins. Mascarenses et maris Pacifici extensa, et in aliis regionibus tropicis culta v. inquilina.

Ordo quoad flores et fructus nonnullis e præcedentibus affinis, sed characteribus vegetationis ab omnibus Dicotyledonibus Monochlamydeis alienus, primo aspectu *Coniferis* accedens.

1. **Casuarina**, *Forst. Char. Gen.* 103, *t.* 52.—Genus unicum. Character ordinis.

Species uti supra 23. *Miq. Revis. Crit. Casuar.* 1848, *cum tabb.* 12, *in DC. Prod.* xvi. ii. 334, *et Illustr. Pl. Archip. Ind. t.* 7, 8. *Benth. Fl. Austral.* vi. 194. *Poiss. Rech. Casuar. in Nouv. Archiv. Mus. Par.* x. 59, *t.* 4 *ad* 7. *Vent. Jard. Cels. t.* 62. *Andr. Bot. Rep. t.* 346. *Labill. Pl. Nov. Holl. t.* 218. *Hook. f. Fl. Tasm. t.* 96. *F. Muell. Fragm.* vi. *t.* 54.

Genus in dissertatione Poissoni supra citata optime illustratum et in series 2 divisum: A. *Cylindraceæ.* Rami et ramuli plerumque verticillati, cylindracei, raro sub-4-angulati sulcis inter angulos excavatis pilosis. Inflorescentiæ ♂ simplices, ♀ axillares v. laterales. Huc pertinent species omnes Australienses cum paucis e Nova-Caledonia v. aliis regionibus, et in sectiones 3 distribuuntur: 1. *Leiopitys.* Verticilli 7–16-meri, rarius 6-meri. Strobili fructiferi valvæ sæpius prominentes, dorso incrassatæ carinatæ v. angulatæ, gibbo dorsali lævi v. rarissime rugoso. 2. *Trachypitys.* Verticilli 4–5-meri, rarius 6-meri. Strobili fructiferi valvæ rarius ultra gibbum dorsalem crassum latum sæpius rugosissimum v. tuberculatum prominentes. 3. *Acanthopitys.* Strobili fructiferi valvæ valde prominentes, gibbo dorsali in acumen rigidum producto. B. *Tetragonæ.* Rami sparsi v. pseudoverticillati, ramulis 4-angulis, sulcis inter angulos 0 v. parum intrusis; vaginæ 4-dentatæ. Inflorescentia ♂ sæpius composita. Strobili fructiferi quadrati, squamis a latere dilatatis, valvis exsertis. Species 7 quarum una Archipelagi Malayani incola, cæteræ omnes Novo-Caledonicæ.

Ordo CLIX. CUPULIFERÆ.

Endl. Gen. 273. Corylaceæ, Lindl. Veg. Kingd. 290. Betulaceæ, Endl. Gen. 272. Lindl. Veg. Kingd. 251. Castaneaceæ, Baill. Hist. Pl. vi. 217, pro parte.

Flores monoici, masculi in spicis amentaceis pendulis v. erectis, rarius cymoso-capitati, feminei vario spicati capitati v. solitarii. Fl. ♂: *Perianthium* simplex, membranaceus, v. 0. *Stamina* 2–4 v. ∞, toro affixa, filamentis liberis brevibus v. filiformibus. *Antherarum* loculi 2, erecti, paralleli, nunc discreti ad apicem filamenti sessiles v. breviter stipitati, nunc connectivo parvo juncti basi v. prope basin affixi, rima longitudinali dehiscentes, interdum latiuscule 2-valves. *Ovarii* rudimentum pilosum v. 0. Fl. ♀: *Perianthium* ovario adnatum v. 0, limbo dum adsit sæpius parvo annulari v. dentato. *Ovarium* inferum v. nudum, sub anthesi sæpius solidum, ovula distincta non exhibens, post fœcundationem plus minus perfecte 2–3-loculare, rarius 4–6-loculare; styli tot quot loculi, interdum basi in stylum ramosum connati, breves v. elongati tenuesque, nunc apice solo nunc superne introrsum v. fere tota superficie interiore stigmatosi. *Ovula* in loculis solitaria, v. gemina collateralia, apice v. sub apice lateraliter affixa, pendula v. descendentia, anatropa v. hemianatropa, micropyle supera. *Fructus* nuceus, bracteis v. bracteolis vario accretis stipatus inclusus v. involucratus; pericarpium crustaceum v. induratum, indehiscens. *Semen* abortu sæpissime unicum, testa membranacea. *Albumen* 0. *Cotyledones* carnosæ, læves rugosæ v. ruminatæ; radicula brevis, supera.

Arbores frutiscesve. Folia alterna, penninervia, serrato-dentata v. integerrima, rarius lobata, nunquam composita. Stipulæ liberæ, sæpe fugaces. Inflorescentia varia, amenta mascula tamen sæpissime in ramulis annotinis lateralia præcocia, v. ad basin innovationum, spicæ v. flores feminei sæpius ramulos paucifoliatos terminantes; interdum inflorescentiæ utriusque sexus axillares.

Species ad 400, pro maxima parte per regiones temperatas hemisphærii borealis utriusque orbis late dispersæ, etiam inter tropicos usque ad montes Archipelagi Malayani et Americæ centralis et Columbianæ extensæ, perpaucæ unius tantum generis in hemisphærii australis temperatis et frigidioribus repertæ.

Ordo olim cum *Salicineis*, *Myrica*, *Platano*, aliisque nonnullis in unicum sub nomine *Amentacearum*

junctus, ab auctoribus recentioribus interdum in tres divisus, nobis magis cum natura consentaneus videtur limitibus hic adoptatis. Genera unius ordinis observantur alia perianthii margine in ovario floris fœminei prominente, alia perianthio omnino nullo, inter se tamen valde affinia, e.g., in *Urticaceis*, *Chloranthaceis* aliisque. Ovarium in *Betuleis* nudum est nec superum, ut interdum perperam dicitur.

De foliorum vernatione in *Cupuliferis* affinibusque, confer Döll, Zur Erklärung der Laubknospen der Amentaceen, Frankfurt, 1848, et præcipue Henry in Nov. Act. Nat. Cur. xviii. 525, et xxii. 309. In plerisque generibus, folia novella concava v. in longitudinem plicata facie tota interiore gemmæ applicita sunt v. eam amplectent v. marginibus involutis axi applicita; in *Corylo* tamen folia novella secus costam induplicata laminam duplicem formant, quarum interior dorso gemmæ applicita.

CONSPECTUS GENERUM.

Tribus I. Betuleæ. Amenta ♂ pendula: Perianthii segmenta 4 v. abortu pauciora. Stamina 2–4. Spicæ ♀ imbricato-squamatæ: Flores sub bractea 2–3. Perianthium 0. Ovarium 2-loculare, loculis 1-ovulatis. Styli 2. Nux parva, compressa.

1. Betula. Stamina 2. Spicæ fructiferæ squamæ tenues, 3-fidæ, cum nucibus deciduæ.—*Eur.*, *Asia med. et bor.*, *Amer. bor.*

2. Alnus. Stamina 4. Spicæ fructiferæ squamæ induratæ, post nuces delapsas persistentes.—*Eur.*, *Asia med. et bor.*, *Amer. bor.*, *Andes Amer. austr.*

Tribus II. Coryleæ. Amenta ♂ pendula: Perianthium 0. Stamina 3–∞, toro bracteæ adnato affixa. Inflorescentia ♀ varia: Perianthium ovario adnatum. Ovarium 2-loculare, loculis 1-ovulatis. Styli v. styli rami 2. Nux ovoideo-globosa v. compressiuscula.

3. Carpinus. Bracteolæ ♂ 0. Flores ♀ spicati. Bracteolæ fructiferæ accretæ, venosæ, expansæ, 3-lobæ v. grosse dentatæ, basi apertæ v. brevissime convolutæ, nucem parvam foventes.—*Eur.*, *Asia*, *Amer. bor.*

4. Ostryopsis. Bracteolæ ♂ 0. Flores ♀ spicati. Bracteolæ fructiferæ accretæ, foliaceæ, convolutæ, acuminatæ, apice 3-fidæ, basi margine subconnatæ, nucem parvam includentes.—*Mongolia.*

5. Ostrya. Bracteolæ ♂ 0. Flores ♀ spicati. Bracteolæ fructiferæ accretæ, membranaceæ, vesiculosæ, plano-compressæ, clausæ, minute acuminatæ, nucem parvam basi includentes.—*Eur.*, *Asia*, *Amer. bor.*

6. Corylus. Bracteolæ ♂ intra squamam pone antheras 2 collaterales. Capitula ♀ 2–4-flora, sub anthesi squamis imbricatis involucrata, fructifera ramulum foliatum terminantia. Bracteolæ accretæ, foliaceæ, dentatæ lobatæ v. echinatæ, convolutæ v. basi tubulosæ, nucem majusculam includentes.—*Eur.*, *Asia*, *Amer. bor.*

Tribus III. Quercineæ. Inflorescentia ♂ varia: Perianthium 4–6-lobum v. rarius 7-lobum. Stamina ∞. Flores ♀ secus rhachin spicæ solitarii v. 2–3-ni, squamis imbricatis plus minus conferruminatis involucrati. Ovarium 3-loculare v. rarius 2- v. 4–6-loculare, loculis 2-ovulatis. Involucrum fructiferum sub nuce cupulatum v. nucem omnino includens.

7. Quercus. Spicæ ♂ amentaceæ pendulæ v. utriusque sexus erectæ, strictæ. Ovarium floris ♀ 3- rarissime 4–5-loculare. Involucrum fructiferum squamarum apicibus areolatum annulatum v. echinatum, cæterum inerme, sub nuce cupulatum v. nucem pro maxima parte v. omnino includens.—*Eur.*, *Asia temp. et trop.*, *Amer. bor.*, *mont. Amer. cent. et Columbiæ.*

8. Castanopsis. Spicæ utriusque sexus erectæ, strictæ. Ovarium floris ♀ 3-loculare. Involucrum fructiferum aculeorum v. tuberculorum fasciculis armatum, nucem omnino includens, perfecte clausum v. demum irregulariter fissum. — *Asia trop. et or. subtrop.*, *California.*

9. Castanea. Spicæ utriusque sexus erectæ, strictæ. Ovarium floris ♀ 6-loculare. Involucrum fructiferum dense echinatum, nuces 1–2 omnino includens, demum 2–4-valvatim dehiscens.—*Eur.*, *Asia temp.*, *Amer. bor.*

10. Fagus. Flores ♂ laxe globoso-capitati v. in pedunculo 1–3-ni. Ovarium floris ♀ 3-loculare. Involucrum fructiferum aculeis v. fimbriis echinatum, nuces 2–4 omnino includens, demum valvatim 4-partitum.—*Eur.*, *Asia temp. et bor.*, *Amer. bor.*, *Amer. austr. extratrop.*, *Austral.*, *Nov. Zel.*

TRIBUS I. BETULEÆ.

1. **Betula**, *Linn. Gen. n.* 1052, *pro parte*.—Flores monoici, ♂ in spicis amentaceis pendulis squamoso-bracteatis, sub quaque squama sæpius 3. Bracteolæ intra squamam cui basi adnatæ 2, collaterales. Perianthia sessilia, membranacea, in segmenta 4 v. abortu pauciora divisa; segmentum anticum ovatum antheris æquilongum, cætera sæpius minima v. abortiva. Stamina 2, anticum et posticum, filamentis brevissimis; antheræ ovatæ, loculis erectis parallelis discretis, ad apicem filamenti brevissime stipitatis. Ovarii rudimentum 0. Flores ♀ in spicis cylindraceis erectis dense imbricato-bracteatis, sub quaque bractea sæpius 3. Bracteolæ intra squamam 2, collaterales. Perianthium 0. Ovarium nudum, sessile, plano-compressum, 2-loculare; styli 2, cylindracei, tenues, apice stigmatosi; ovula in loculis solitaria, sub apice affixa, micropyle supera. Spicæ fructiferæ cylindraceæ, incrassatæ, bracteis cum bracteolis in squamam 3-fidam connatis, cum fructibus deciduis. Nuces parvæ, compressæ, anguste v. late bialatæ, stylis persistentibus sæpius coronatæ, ante casum bractearum in spica inclusæ; exocarpium tenue, endocarpium crustaceum v. leviter induratum. Semen abortu unicum, pendulum, testa membranacea; cotyledones planæ, radicula brevi supera.—Arbores fruticesve. Folia alterna, dentata v. serrata, rarius incisa, penninervia. Spicæ terminales v. axillares, sæpe ramulum brevissimum 1-2-foliatum axillarem terminantes, solitariæ v. ♂ sæpe ♀ in speciebus perpaucis, 2–4 subracemosæ.

Species ad 25, per Europam, Asiam mediam et borealem, et Americam borealem late dispersæ. *Regel, Monogr. Betul. in Mem. Soc. Imp. Nat. Mosc.* xiii. 9, *t.* 1 *ad* 13, *in Bull. Soc. Imp. Nat. Mosc.* 1865, ii. *t.* 6 *ad* 8, *et in DC. Prod.* xvi. ii. 162. *Gærtn. Fruct.* ii. *t.* 90. *Nees, Gen. Fl. Germ. Monochl. n.* 18. *Reichb. Ic. Fl. Germ. t.* 621 *ad* 627. *Jacq. Hort. Vind. t.* 122. *Wats. Dendrol. Brit. t.* 94, 95. 97. 144, 151 *ad* 154. *Pall. Fl. Ross. t.* 39, 40. *Trautv. Imag. Fl. Ross. t.* 5, *et in Middend. Reise, Bot. t.* 21. *Dcne. in Jacquem. Voy. Bot. t.* 158. *Brandis, For. Fl. t.* 66. *Mich. Arb. Amer. Sept.* ii. *t.* 1 *ad* 5. *Nutt. N. Amer. Sylv. t.* 7, 8. *Torr. Fl. N. York, t.* 112 *ad* 114. *S. Wats. Bot. U. S.* 40 *Parall. t.* 35.

BETULASTER, *Spach in Ann. Sc. Nat. ser.* 2, xv. 198, genus propositum fuit ad *B. acuminatam* Wall. Pl. As. Rar. t. 109 (cui includendæ *B. cylindrostachys*, Wall., et *B. nitida*, Don), spicis ♀ sæpius 2–4-nis, et fructus alis squamas strobili superantibus, characteres tamen levioris momenti et vix constantes, nam spicæ ♀ sæpe geminæ in *B. Bhojpattra*, Wall., et alæ fructus quoad latitudinem in pluribus speciebus variant. Regel genus Spachianum pro sectione admisit addita *B. Maximowicziana*, Reg., e Japonia. Hæc species spicas ♀ 4-nas exhibet sed alæ fructus squamis strobili insigniter breviores.

2. **Alnus**, *Gærtn. Fruct.* ii. 54, *t.* 90.—Flores monoici, ♂ in spicis amentaceis pendulis squamoso-bracteatis, sub quaque bractea sæpius 3. Bracteolæ intra squamam cui basi affixæ 3–5. Perianthia sessilia, 4-partita, segmentis æqualibus leviter imbricatis antheras æquantibus v. inæqualibus plerisque minute squamiformibus. Stamina 4, filamentis brevissimis; antheræ ovatæ, loculis distinctis parallelis supra basin connectivo minuto affixæ. Ovarii rudimentum 0. Flores ♀ in spica cylindracea v. oblonga imbricato-squamata sub quaque bractea sæpius 2. Bracteolæ intra squamam 2–4, minutæ. Perianthium 0. Ovarium nudum, sessile, plano-compressum, 2-loculare; styli 2, cylindracei, breves, apice stigmatosi; ovula in loculis solitaria, sub apice lateraliter affixa, micropyle supera. Spicæ fructiferæ incrassatæ, ovoideæ v. breviter cylindraceæ, squamis auctis induratis lignosis post nuces delapsas persistentibus, primum dense imbricatis, maturitate patentibus apertis. Nuces parvæ, compressæ, bialatæ v. nudæ; exocarpium tenue; endocarpium crustaceum. Semen abortu unicum, pendulum, testa membranacea; cotyledones planæ, radicula brevi supera.—Arbores fruticesve. Folia alterna, decidua, penninervia, serrata v. rarius integerrima. Spicæ ♂ et ♀ e gemmis distinctis sæpius 3–∞, racemosæ, hieme v. jam autumno præcedente ad axillas foliorum formatæ, primo vere ante foliorum evolutionem florentes v. rarius foliis novellis coetaneæ, tempus tamen evolutionis non semper in eadem specie constans.

Species ad 14, per Europam, Asiam mediam et borealem, Americam borealem et Andes Americæ

australis late dispersæ, una ex Europæis etiam in Africa australi obvia, sed forte inquilina. *Regel in Mem. Soc. Imp. Nat. Mosc.* xiii. 73, *t.* 14 *ad* 17, *et in DC. Prod.* xvi. ii. 181. *Mirb. in Mem. Mus. Par.* xiv. *t.* 21, 22. *Wats. Dendrol. Brit. t.* 96 (*Betula*). *Nees, Gen. Fl. Germ. Monochl. n.* 19. *Reichb. Ic. Fl. Germ. t.* 628 *ad* 631. *Ten. Fl. Nap. t.* 99. *Eichw. Pl. Cauc. Casp. t.* 2. *Brand. For. Fl. t.* 57. *Mich. Arb. Amer. Sept.* iii. *t.* 4. *Nutt. N. Amer. Sylv. t.* 9, 10. *Torr. Fl. N. York t.* 115, 116. *Lodd. Bot. Cab. t.* 1141, 1231.

Genus naturalissimum, *Betulæ* affine sed facillime definitum, nec nostro sensu sectiones distinctas præbet, etsi a Spachio in genera tria, v. a Regelio in sectiones 4 divisum, characteribus levioris momenti v. vix constantibus e tempore evolutionis florum v. e segmentis perianthii ♂ sumptis. ALNASTER, *Spach in Ann. Sc. Nat. ser.* 2, xv. 200 (ALNOBETULA, *Schur, Enum. Pl. Trans.* 614), est *A. viridis, DC.*, cujus stipulæ et squamulæ sub spicis (perulæ, *Regel*) solito majores sunt et spicæ præsertim ♀ vix ante foliorum evolutionem florent. CLETHROPSIS, *Spach, l.c.* 201, species 2 Indicas continet (*Wall. Pl. As. Rar. t.* 131; *Dcne. in Jacquem. Voy. Bot. t.* 159), quarum folia integerrima v. parce minuteque dentata et perianthii ♂ segmenta parva inæqualia squamiformia nunc minima. Flores tamen nobis videntur ad normam terni 4-andri v. hinc inde abortu 3-andri, nec in unum 10–12-merum 10–12-andrum confluentes. Amenta ♂ in *A. nepalense* numerosa, paniculata, in *A. nitida* tamen sæpius 3-4-na.

TRIBUS II. CORYLEÆ.

3. **Carpinus,** *Linn. Gen. n.* 1073, *pro parte.*—Flores monoici, ♂ in spicis amentaceis pendulis squamoso-bracteatis. Bracteolæ 0. Perianthium 0. Stamina 3–∞, in toro piloso ad basin bracteæ adnato conferta, filamentis brevissime filiformibus; antherarum loculi erecti, discreti, oblongi, apice pilosi, rima longitudinali dehiscentes, ad apicem filamenti gemini v. rarius singuli, breviter stipitati. Flores ♀ in spicis laxis erectis subfoliaceo-bracteatis, ad basin bracteæ gemini, sessiles, singuli bracteola lineari basi utrinque lobulo aucta amplexi. Perianthium ovario adnatum, margine parum prominulo denticulato. Ovarium inferum, post fœcundationem 2-loculare; stylus in ramos 2 erectos lineari-subulatos superne introrsum stigmatosos divisum; ovula in quoque loculo solitaria, pendula, anatropa. Sub fructu bracteæ primariæ spicæ sæpius delapsæ, bracteolæ basi immutatæ v. paullo auctæ, nucem amplectentes, superne valde accretæ, foliaceæ, expansæ, varie 3-lobæ v. grosse dentatæ. Nux ad basin bracteolæ sessilis v. ea semi-inclusa, ovoidea v. subglobosa, indehiscens, extus perianthii adnati nervis ∞-costata, pericarpio duro haud crasso. Semen abortu unicum, pendulum, testa membranacea; cotyledones crasso-carnosæ, æquales, radiculam superam tegentes.—Arbores v. rarius frutices. Folia alterna, petiolata, sæpius duplicato-serrata, crebre et parallele subplicato-pennivenia. Amenta ♂ ad basin innovationum lateralia. Spicæ fœmineæ etiam fructiferæ erectæ, terminales.

Species 9, per regiones temperatas hemisphærii borealis utriusque orbis late dispersæ. *A. DC. Prod.* xvii. ii. 126. *Nees, Gen. Fl. Germ. Monochlam. n.* 20. *Reichb. Ic. Fl. Germ. t.* 632 *ad* 634. *Wats. Dendrol. Brit. t.* 98, 157. *Wall. Pl. As. Rar. t.* 106. *Brand. For. Fl. t.* 66. *Torr. Fl. N. York, t.* 103. *Mich. N. Amer. Sylv.* iii. *t.* 108.

DISTEGOCARPUS, *Sieb. et Zucc. Fam. Nat. Fl. Jap.* ii. 102, *t.* 3; *A. DC. Prod.* xvi. ii. 127, includit species Japonicas, typicis imprimis *C. duinensi*, Scop. (*C. orientali*, Lam.) similes, sed bracteolarum basis per anthesin ut in illis minuta, post anthesin paullulum accrescit, nucem amplectens et demum latere fissa ligulam interiorem format, uti nostro sensu rite observavit Blume, Mus. Bot. Lugd. Bat. i. 308.

4. **Ostryopsis,** *Dcne. in Bull. Soc. Bot. Fr.* xx. 155.—Flores monoici, ♂ in spicis amentaceis pendulis squamoso-bracteatis. Bracteolæ 0. Perianthium 0. Stamina 4–6, toro parvo glabro ad basin bracteæ adnato affixa, filamentis brevibus; antherarum loculi erecti, distincti, ad apicem filamenti stipitati v. subsessiles, glabri, rima longitudinali dehiscentes. Flores ♀ in spica erecta v. recurva globosa v. ovoidea, ad basin bracteæ membranaceæ gemini, singuli intra basin bracteolæ foliaceæ 3-fidæ sessiles, subinclusi. Perianthium ovario adnatum, limbo brevi membranaceo subdentato. Ovarium inferum, 2-loculare; stylus 2-fidus, ramis elongatis tenuibus introrsum stigmatosis; ovula in

loculis solitaria, pendula, anatropa. Bracteolæ fructiferæ accretæ, foliaceæ, marginibus basi subconnatis superne involutis involucrum formantes longe acuminatum, apice 3-fidum, basi nucem includens. Nux parva, late ovoidea, suborbiculata, compressiuscula, extus perianthii adnati nervis tenuiter costata, perianthii limbo accreto membranaceo tubuloso nuce ipso vix breviore coronata; pericarpium crustaceum. Semen abortu unicum, testa membranacea; cotyledones crasso-carnosæ, æquales, radicula brevissima supera.—Frutex humilis. Folia alterna, petiolata, cordata, duplicato-serrata, pennivenia, transversim venulosa. Amenta ♂ brevia, e gemmis anni præteriti ad basin innovationum. Spicæ ♀ breves, terminales, breviter pedunculatæ, fructiferæ recurvæ. Bracteæ primariæ sæpius persistentes, immutatæ v. emarcidæ.

Species 1, Mongoliæ orientalis incola.

Genus *Carpino* affine, differt bracteolis fructiferis fere ut in *Corylo* clausis et præsertim perianthii limbo post anthesin accreto. Foliorum forma fere *Coryli avellani*, sed vernatio *Carpini*. Baillon, Hist. Pl. vi. 224, genus *Corylo* adjunxit, a quo tamen distincte differt floribus tam masculis quam fœmineis *Carpini* aliisque notis.

5. **Ostrya**, *Scop. Fl. Carn.* 414.—Flores monoici, ♂ in spicis amentaceis pendulis squamoso-bracteatis. Bracteolæ 0. Perianthium 0. Stamina 3–∞, in toro piloso ad basin bracteæ adnato conferta, filamentis brevissime filiformibus; antherarum loculi erecti, discreti, oblongi, apice pilosi, rima longitudinali dehiscentes, ad apicem filamenti gemini v. rarius singuli, breviter stipitati. Flores ♀ in spicis laxis erectis subfoliaceo-bracteatis ad basin bracteæ gemini, singuli bracteola parva sub-3-loba basi breviter cupulata stipati. Perianthium ovario adnatum, margine parum prominulo denticulato. Ovarium inferum, post fœcundationem 2-loculare; stylus in ramos 2 erectos lineari-subulatos superne introrsum stigmatosos divisus; ovula in quoque loculo solitaria, pendula, anatropa. Sub fructu bracteæ primariæ delapsæ, bracteolarum pars cupulata valde accreta, membranacea, ovata, vesiculoso-compressa, apice clausa et lobis minimis emarcidis coronata. Nux in bracteola utriculosa sessilis eaque multo brevior, pericarpio crustaceo duriusculo. Semen abortu unicum, pendulum, testa membranacea; cotyledones crasso-carnosæ, æquales, radiculam brevem superam tegentes.—Arbores. Folia alterna, petiolata, duplicato-serrata, crebre et parallele subplicato-pennivenia. Amenta ♂ ad basin innovationum laterales. Spicæ fructiferæ bracteolis imbricatis numerosis strobiliformes, fere lupulinæ, sæpius recurvæ v. pendulæ.

Species 2, inter se vix distinctæ, regionum temperatarum hemisphærii borealis incolæ, altera gerontogea, altera Americana. *Alph. DC. Prod.* xvi. ii. 124. *Micheli, Nov. Pl. Gen. t.* 104. *Nees, Gen. Fl. Germ. Monochl. n.* 21. *Reichb. Ic. Fl. Germ. t.* 635. *Wats. Dendrol. Brit. t.* 143. *Torr. Fl. N. York, t.* 102. *Mich. N. Amer. Sylv.* iii. *t.* 109 (*Carpinus*).

6. **Corylus**, *Linn. Gen. n.* 1074.—Flores monoici, ♂ in spicis amentaceis pendulis squamoso-bracteatis. Bracteolæ 2, collaterales, bracteæ intus pone antheras affixæ eaque vix breviores. Perianthium 0. Stamina ∞ (4–8), in toro piloso ad basin bracteæ conferta, filamentis brevissimis filiformibus; antherarum loculi erecti, discreti, oblongi, apice pilosi, rima longitudinali dehiscentes, ad apicem filamenti singuli v. 2–3-natim stipitati. Flores ♀ in capitulo globoso sessili squamis numerosis imbricatis vacuis involucrati, ad basin squamarum 2–3 superiorum v. interiorum geminatim sessiles, singuli bracteola minuta pilosa inæqualiter 3-partita stipati. Perianthium ovario adnatum, margine annulari denticulato sub apice ovarii parum prominulo. Ovarium inferum, post fœcundationem 2-loculare; stylus a basi in ramos 2 lineari-subulatos superne introrsum stigmatosos divisus; ovula in quoque loculo solitaria, pendula, anatropa. Sub fructu bracteæ primariæ sæpe delapsæ v. emarcidæ, bracteolæ quam maxime accretæ, foliaceæ, varie dentatæ lobatæ v. aculeis horridæ, basi nucem globosam v. ovoideam includentes; pericarpium durum. Semen abortu unicum, pendulum, testa membranacea; cotyledones crasso-carnosæ, æquales, radicula brevissima supera.—Arbores fruticesve. Folia alterna, pennivenia, duplicato-serrata, venis primariis in plerisque speciebus magis distantibus quam in *Carpino* et vernatio ab omnibus affinibus differt folio juniore secus costam

induplicato lamina interiore dorso gemmæ applicita. Amenta ♂ præcocia, e gemmis in ramis annotinis fasciculata. Capitula ♀ sub anthesi in ramis annotinis aphyllis lateralia, post anthesin in ramulum foliatum evoluta, fructibus ad apicem per 2–6 fasciculatis. Nuces quam in generibus præcedentibus majores.

Species editæ 7, per regiones temperatas hemisphærii borealis latissime dispersæ, pleræque gerontogeæ, 2 boreali-Americanæ, quarum una etiam in Asia orientali extratropica obvia. *A. DC. Prod.* xvi. ii. 129. *Nees, Gen. Fl. Germ. Monochlam. n.* 22. *Reichb. Ic. Fl. Germ. t.* 636 *ad* 638. *Wats. Dendrol. Brit. t.* 99. *Trautv. Imag. Fl. Ross. t.* 4. *Dcne. in Jacquem. Voy. Bot. t.* 160.

C. ferox, Wall. Pl. As. Rar. i. 77, t. 87 (sect. *Acanthochlamys*, Spach, in Prodromo recepta), a cæteris speciebus parum differt foliis ut in *Carpino* evidentius plicato-penniveniis et bracteolis fructiferis apice dentibus spinescentibus horridis, vix tamen in sectionem distinctam separandus videtur. Foliorum vernatio *Coryli*, etsi folium infimum gemmæ facie tota gemmæ applicitum v. vix basi auricula parva inflexum; sequentia tamen more generis induplicata, lamina interiore minore v. exteriorem subæquante.

Tribus III. Quercineæ.

7. Quercus, *Linn. Gen. n.* 1070.—**Flores monoici, in spicis unisexualibus amentaceis v. erectis rarissime androgynis sessiles v. subsessiles. Fl. ♂: Perianthium campanulatum lobatum v. ad basin divisum, lobis segmentisve 4–7 sæpius 6 membranaceis imbricatis. Stamina ∞, sæpius ad 6, interdum 10–12, filamentis liberis filiformibus exsertis; antheræ erectæ, ovatæ oblongæ v. rarius subglobosæ, loculis contiguis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum parvum pilosum v. obsoletum. Fl. ♀ singuli intra involucrum e squamis imbricatis varie conferruminatis inclusi. Perianthium sæpius urceolatum, tubo ovario adnato, limbo brevi campanulato sæpius 6-lobo v. obsolete denticulato. Staminodia interdum adsunt parva. Ovarium inferum, post fecundationem (v. jam sub anthesi ?) plus minus perfecte 3-loculare, rarissime 4–5-loculare; styli totidem, sæpius breves, erecti v. recurvi, teretes v. apice dilatati v. clavati, nunc summo vertice, nunc superne, introrsum stigmatosi; ovula in loculis gemina, pendula v. lateraliter affixa, anatropa v. hemianatropa, micropyle supera. Involucrum fructiferum auctum sæpeque induratum, sub nuce cupulatum v. nucem pro maxima parte v. omnino includens, indivisum v. demum irregulariter fissum, squamaram apicibus areolatum zonatum tuberculatum v. varie echinatum (nec aculeis armatum). Nux, *glans* dicta, cupula insidens v. rarius omnino inclusa, a cupula, basi umbiliciformi excepta, libera v. rarius altius adnata; pericarpium crustaceum v. coriaceum, rarius crassum induratum grosse granulatum v. osseum, indehiscens. Semen abortu sæpissime unicum, testa membranacea; cotyledones crasso-carnosæ, nunc undique æquales, nunc varie sulcatæ ruminatæ v. lobatæ, radicula supera brevi inter cotyledones retracta v. parum prominula. —Arbores, rarius frutices. Folia alterna, annua v. perennantia, integerrima dentata v. lobata, membranacea v. coriacea, pennivenia, venis primariis nunc ante marginem in rete venularum transeuntibus, nunc parallele et distincte ad marginem extensis, venulis intermediis transverse v. parum distinctis. Inflorescentia dimorpha, infra sub *Lepidobalano* et *Pasania* descripta.**

Species fere 300, per regiones temperatas hemisphærii borealis utriusque orbis late dispersæ, et inter tropicos in montosis Americæ usque ad Columbiam et Asiæ usque ad Archipelagum Malayanum extensæ. Cæterum omnino desunt in America australi, in Africa præter regionem Mediterraneam, in insulis Mascarensibus, Australasia et insulis maris Pacifici, nec in Nova Guinea hucusque repertæ. *A. DC. Prod.* xvi. ii. 3. *Blume, Fl. Jav. Cupul. cum tabb.* 20, *et Mus. Bot. Lugd. Bat.* i. 286. *Miq. Ann. Mus. Lugd. Bat.* i. 102. *Œrst. in Vidensk. Meddel. Nat. Foren. Kjöbenh.* 1866, 11, *t.* 1, 2, *et in Liebm. Chênes Amer. Trop., Copenh.* 1868, *cum tabb.* 47, *edit. Leipzig*, 1869.

Genus œconomiæ nostræ maximi momenti, ab auctoribus pluribus tam de flore Americana quam de Europæa v. Asiatica tractantibus repetiter scrutatum, et ab Alph. DC. summa cura elaboratum. Endlicher primus, Gen. Pl. Suppl. iv. ii. 24, *Quercum* in sectiones 3 divisit cum generibus 2 monotypicis, Blume fere easdem sectiones aliis nominibus signavit. Miquel, partim ex observationibus Candollei sectiones 6 admisit. Alph. DC. pariter genus in sectiones 6 divisit a Miquelianis parum diversas, et in specierum ordinatione characteribus 2 novis usus est, fructus maturationis duratione

annua v. biennia, et ovulorum abortientium situ juxta basin v. prope apicem seminis. Hic, tamen character, observatu difficilis, et vix in quartam partem e numero specierum verificatus, nec semper cum differentiis naturalibus conveniens, ad usum practicum parum asservit, et fructus duratio in speciebus cæterum quam maxime affinibus diversa est. Œrsted serius characterem protulit ab auctoribus prius neglectum, e stylorum indole derivatum, et genera propria 4 proposuit, uno excepto sectionibus majoribus Candolleanis conformia. Genus tamen nostra sententia in integrum servatum bene limitatur, et in sectiones sequentes a Candolleanis v. Œrstedianis parum mutatas commode dividitur.

1. *Lepidobalanus*, Endl. Spicæ ♂ tenues, flexiles, laxæ, sæpius pendulæ (*amenta proprie dicta*). Involucra ♀ cupulata v. ore aperta, squamarum apicibus imbricatis. Styli superne introrsum stigmatosi, subulati v. apice dilatati v. capitati.—Folia varia, decidua v. perennantia, sæpissime tamen plurima v. omnia plus minus dentata v. lobata. Amenta ♂ e gemmis lateralibus ramulorum annotinorum v. ad basin innovationum sæpius 2–∞. Flores sub bracteis parvis sæpius solitarii rarius 3-ni, (an semper?) ebracteolati. Involucra ♀ solitaria, subsessilia v. in spica brevi ∞. Species tam in America quam in Europa et Oriente numerosæ, in Asia media et orientali pauciores. *A. DC. Prod.* xvi. ii. 3. *Kotschy, Eichen Europas und des Orients, Wien,* 1862, *cum tabb.* 40. *Ness. Gen. Fl. Germ. Monochl. n.* 23. *Reichb. Ic. Fl. Germ. t.* 641 *ad* 650. *Wats. Dendrol. Brit. t.* 89 *ad* 93. *Hayne, Arzneig.* vi. *t.* 35, 36, xii. *t.* 43 *ad* 48. *Boiss. Voy. Esp. t.* 164 *ad* 166. *Cav. Ic. Pl. t.* 129. *Laguna, Com. Fl. Forest. Espan.* 1872, *t.* 2, 3, 5, 6, 12, 13. *Ten. Fl. Nap. t.* 197, 198. *Eichw. Pl. Cauc. Casp. t.* 38. *Labill. Dec. Pl. Syr.* v. *t.* 6. *Jaub. et Spach. Ill. Pl. Or. t.* 54 *ad* 58. *Hook. f. in Trans. Linn. Soc.* xxiii. *t.* 36 *ad* 38. *Tchihatch. As. Min. t.* 40 *ad* 42. *Wall. Pl. As. Rar. t.* 174. *Royle, Illustr. Bot. Himal. t.* 84. *Lindl. in Paxt. Fl. Gard.* i. 59, *f.* 37. *Mich. Hist. Chênes de l'Amér. Paris,* 1801, *cum tabb.* 36; *Hist. Arb. Amer. Sept.* ii. *t.* 1 *ad* 26. *Emerson, Rep. Trees Massach. t.* 1 *ad* 11. *Wesmaël. in Bull. Fed. Soc. Hort. Belg.* 1869, 321, *cum tabb.* 18. *Torr. in Ann. Lyc. N. York,* ii. *t.* 4, *Fl. N. York, t.* 104 *ad* 109, *in Emory, Not. Milit. Reconn. App. t.* 9, *in Bot. Emory Exped. t.* 51, *et in Rep. Sitgr. Exped. Bot. t.* 17 *ad* 19. *A. Gray, Bot. Amer. Expl. Exped.* ii. 458, *t.* 15. *Engelm. in S. Wats. Bot. Calif.* ii. 93. *Hook. Ic. Pl. t.* 382, 383, 402, 403. *Liebm. Chênes Amér. Trop. t.* 1 *ad* 47. *Humb. et Bonpl. Pl. Æquin. t.* 75 *ad* 96, *et t.* 129 *ad* 131.

2. *Cyclobalanopsis*, Œrst. Amenta ♂ ut in *Lepidobalano* tenuia, pendula. Involucra ♀ ut in *Cyclobalano* cupulata v. ore aperta, squamarum apicibus in laminas v. zonas annulares concentricas integras v. tardius denticulatas lateraliter connatis. Styli *Lepidobalani* superne introrsum stigmatosi v. in stigma crassum dilatati.—Folia sæpissime dentata, rarius lobata v. integerrima. Inflorescentia *Lepidobalani*. Species ad 15, omnes Asiaticæ, Indicæ Malayanæ Chinenses v. Japonicæ. *Blume, Fl. Jav. Cupul. t.* 18, 19. *Korth. in Verh. Nat. Geschied. t.* 47, *f.* 18. *Wall. Pl. As. Rar. t.* 149, 150. *Hook. f. et Cathc. Ill. Himal. Pl. t.* 20. *Wight, Ic. t.* 211. *Brand. For. Fl. t.* 65. *Kæmpf. Ic. Fl. Japon. t.* 17. *Seem. Bot. Her. t.* 90. Cyclobalanopsis, *Œrst. in Liebm. Chênes Amér. Trop.* 19. Species paucæ imprimis Chinenses v. Japonicæ *Cyclobalanopsem* cum *Pasaniæ* arcte connectunt.

3. *Pasania*, Miq. Spicæ ♂ erectæ, interdum paniculatæ. Involucra ♀ cupulata v. ore aperta, squamarum apicibus imbricatis. Styli teretes, erecti, brevissimi v. rarius longiusculi, apice solo stigmatosi.—Folia integerrima v. rarissime hinc inde paucidentata. Spicæ ♂ axillares, strictæ. Flores sub bracteis sæpius 3–5, arcte sessiles, 2-bracteolati. Involucra ♀ secus rhachin elongatam v. brevissimam v. interdum ad basin spicæ ♂ singula v. ternatim conferta v. coalita. Species ad 30, quarum una Californica, cæteræ Asiaticæ, Indicæ Malayanæ Chinenses v. Japonicæ. *A. DC. Prod.* xvi. ii. 82. *Blume, Fl. Jav. Cupul. t.* 1 *ad* 12, 17. *Lambert, Pinus,* ii. *t.* 8. *Korth. in Verh. Nat. Geschied. t.* 43. *Wall. Pl. As. Rar. t.* 46. *Wight, Ic. t.* 213, 219 *ad* 221. *Kurz in Journ. Asiat. Soc. Beng.* xliv. 196, *t.* 14. *Brand. For. Fl. t.* 64. *Oudem. Annot. Cupul. Jav.* (*in Verh. K. Akad. Amst.* xi.) *t.* 1 *ad* 7. *Sieb. et Zucc. Fl. Jap. t.* 89. *Lindl. in Paxt. Fl. Gard.* i. 59, *f.* 36. *Seem. Bot. Her. t.* 87, 88 (*et* 89?). *Hook. Ic. Pl. t.* 224.

Species Californica, *G. densiflora*, Hook. Ic. Pl. t. 380, in Prodromo xvi. ii. 81, pro sectione propria *Androgyne* separatur, sed characteres omnino *Pasaniæ* præbet. Styli in speciminibus nostris sat numerosis sæpissime 3 etsi interdum (ut etiam observatur in nonnullis aliis *Pasaniis*) variant 4 v. rarissime 5. Spicæ hinc inde androgynæ (involucris ♀ paucis ad basin spicarum ♂) occurrunt in pluribus speciebus *Pasaniæ*.

Synædrys, *Lind. Introd. Nat. Syst. ed.* 2, 441, est *G.* (*Pasania*) *cornea*, Lour., a Lindleyo olim generice distincta ob pericarpium durum et cotyledones valde ruminato-corrugatas v. lobatas, characteres in speciebus paucis sectionum plurium imprimis *Pasaniæ* et *Cyclobalani* observatis. Pasania, *Œrst. in Liebm. Chênes Amér. Trop.* 20, includit sectiones nostras *Pasaniam* et *Chlamydobalanum*.

4. *Cyclobalanus*, Endl. Spicæ erectæ, flores ♂, styli et folia *Pasaniæ*. Involucra ♀ cupulata v. ore aperta, squamarum apicibus in lamellas concentricas seu zonas distinctas integerrimas v. demum denticulatas lateraliter connatis. Species fere 50, omnes Asiaticæ, ab Archipelago Malayano usque ad Chinam extensæ. *A. DC. Prod.* xvi. ii. 91 (sect. *Cyclobalanus*). *Blume, Fl. Jav. Cupul. t.* 13 *ad* 16. *Korth. in Verh. Nat. Geschied. Bot. t.* 46, 47. *Oudem. Annot. Cup. Jav. t.* 8, 10. *Seem. Bot. Her. t.* 89? 90, 91. Cyclobalanus, *Œrst. in Liebm. Chênes Amér. Trop.* 20. *G. celebica*, Miq., et *G. induta*, Bl., in Prodromo sub *Cyclobalano* enumeratæ, nobis potius ad *Pasaniam* referendæ videntur.

5. *Chlamydobalanus*, Endl. Spicæ erectæ, flores ♂, styli et folia *Pasaniæ*. Involucra ♀ ovoidea v. globosa, extus concentrice zonata v. squamarum apicibus subverticillatim notata, clausa v. demum irregulariter fissa. Nux omnino inclusa sed ab involucro præter basin libera, pericarpio crustaceo v. osseo. Species ad 8, omnes Asiaticæ, Indicæ Malayanæ Chinenses v. Japonicæ. *A. DC. Prod.* xvi. ii. 102. *Korth. in Verh. Nat. Geschied. Bot. t.* 44, 45. *Wight, Ic. t.* 212. *Sieb. et Zucc. Fl. Jap. t.* 2. *Seem. Bot. Her. t.* 92. *Benth. in Hook. Ic. Pl. t.* 1312, 1313.

6. *Lithocarpus*, Miq. Spicæ erectæ, flores ♂, styli et folia *Pasaniæ*. Involucra ♀ majuscula v. magna, ovoidea v. globosa, extus concentrice et oblique zonata v. squamarum apicibus prominentibus rigidis echinata, clausa v. demum prope apicem circumscissa. Nux omnino inclusa, involucro alte v. fere ad apicem cohærens, pericarpio crasso duro granuloso v. osseo. Species 4, Asiaticæ, Indicæ v. Malayanæ. *A. DC. Prod.* xvi. ii. 104. *Benth. in Hook. Ic. Pl. t.* 1314, 1315. *Kurz in For. Fl. Burm.* ii. 489. *Oudem. Annot. Cup. Jav. t.* 11, 12. Lithocarpus, *Blume, Fl. Jav. Cupul.* 34, *t.* 20.

8. **Castanopsis,** *Spach in Suit. Buff.* xi. 185.—Flores monoici, utriusque sexus in spicis erectis unisexualibus v. rarius androgynis sessiles. Fl. ♂ sub bractea 1–3, 2-bracteolati. Perianthium campanulatum, 5–6-lobum v. partitum, lobis segmentisve imbricatis. Stamina ∞ (sæpius 10–12), filamentis filiformibus exsertis; antheræ parvæ, loculis parallelis longitudinaliter dehiscentibus. Ovarii rudimentum parvum, hirsutum. Fl. ♀ intra involucrum e squamis imbricatis conferruminatis 3-natim inclusi v. rarius solitarii v. gemini. Perianthium urceolatum, tubo ovario adnato, limbo brevi 6-lobo. Ovarium inferum, post fœcundationem 3-loculare; styli sæpius 3, lineares, ex involucro breviter exserti, stigmate parvo terminali; ovula in loculis gemina, hemianatropa, micropyle supera. Involucrum fructiferum auctum, globosum v. ovoideum, squamarum apicibus parum prominulis plus minus connatis varie annulatum, sæpius tamen aculeis fasciculatis v. ramosis undique dense echinatum v. aculeorum v. tuberculorum fasciculis distinctis armatum, perfecte clausum v. demum irregulariter fissum. Nuces in involucro omnino inclusæ, solitariæ involucro conformes, v. 2–3-næ pressione angulatæ, sæpe pilosæ, pericarpio cartilagineo v. indurato. Semen in nuce abortu sæpius unicum, testa membranacea; cotyledones crasso-carnosæ, in seminibus examinatis æquales, radicula supera inclusa. —Arbores, rarius frutices, habitu *Quercus* sect. *Pasaniæ* v. *Cyclobalani*. Folia alterna, sæpius coriacea, integerrima, parallele pennivenia, venulis secundariis parum conspicuis, in paucis tamen speciebus folia dentata v. venulæ inter venas primarias transverse conspicuæ. Spicæ ♂ tenues, rigidulæ, sæpe elongatæ, interdum paniculatæ, ♀ simplices, masculis breviores v. interdum pariter elongatæ. Bracteæ sub floribus ♂ parvæ.

Species nobis notæ ad 25, quarum una Californica, cæteræ omnes Asiaticæ, Indiæ provinciarum orientalium Archipelagi Malayani v. Chinæ australis incolæ. *A. DC. Prod.* xvi. ii. 109. *Blume, Fl. Jav. Cupul. t.* 21 *ad* 24. *Wight, Ic. t.* 218, 417, 769, 770. *Seem. Bot. Her. t.* 86. *Bot. Mag. t.* 4953. *Torr. Bot. Williams. Exped.* 6, *cum ic.* (*omnes sub Castanea*).

Genus, quoad species typicas sectionem *Eucastanopsis* A.DC. formantes, et iconibus citatis illustratas, a *Quercu* sect. *Chlamydobalano* differt involucris extus more *Castaneæ* aculeis densis echinatis, flores nucesque sæpius (nec semper) 3 continentibus. Callæocarpus. *Miq. Pl. Jungh.* i. 13, ad sectionem *Castanopseos* in Prodromo reductus, species continet paucas, involucris ut in *Chlamydobalano* extus zonatis, zonis parum prominulis tuberculorum v. aculeorum brevium fasciculos dissitos ferentibus. In *C. inermi* (*Castanea inermi*, Lindl.) tuberculi minimi sæpe vix prominuli, species tamen involucris sæpe 2-3-floris huc nec ad *Quercum Chlamydobalanum* referenda.

9. **Castanea,** *Gærtn. Fruct.* i. 181, *t.* 37.—Flores monoici, in spicis erectis unisexualibus v. androgynis sessiles. Fl. ♂ sub bractea ∞, sæpius 3, 2-bracteolati. Perianthium campanulatum, alte partitum, segmentis sæpius 6 imbricatis. Stamina ∞ (10–20), fila-

placenta sæpius 4–8, 2-seriata. Capsula 2-valvis. Semina ordinis.—Arbores v. frutices, interdum humillimi trunco subterraneo ramis humistratis. Folia sæpius angusta v. parva, integerrima v. serrulata, pennivenia; stipulæ variæ. 'Amenta in regionibus temperatis sæpius præcocia sessilia nuda, in calidis et frigidis coetanea, foliato-pedunculata' (*Anders.*). Bracteæ parvæ integerrimæ v. rarius dentatæ.

Species a monographo perito enumeratæ 160, distributione lata ordinis, ubique formis et modificationibus inter se multifariam connexis scatentes, sæpe hybriditate procreatæ, ultra modum intricatæ. *Anderss. in DC. Prod.* xvi. ii. 191; *Monogr. Sal. pars* 1 (quæ sola edita) *in K. Vetensk. Acad. Stockh. Handl.* vi. *cum tabb.* 9. *Forbes, Salictum Wob.*, 1829, *cum tabb.* 140. *Host. Salix*, 1828, *cum tabb.* 105. *Trautv. Salicetum, in Mem. Sav. Etrang. Acad. Petersb.* iii. 607, *cum tabb.* 4. *Nees, Gen. Fl. Germ. Monochl. n.* 15. *Reichb. Ic. Fl. Germ. t.* 557 *ad* 613. *Mich. in Mém. Mus. Par.* xiv. *t.* 20. *Jacq. Fl. Austr. t.* 298, 408, 409. *Pall. Fl. Ross. t.* 81, 82. *Hayne, Arzneig.* xiii. *t.* 39 *ad* 45. *Ledeb. Ic. Fl. Ross. t.* 453 *ad* 455, 460, 476, 480. *Trautv. in Middend. Reise, Bot. t.* 2, 3, 19, 20. *Lundstr. Weid. Now. Zeml. in Nov. Act. R. Soc. Upsal.* 1877, *cum tab.* 1. *Roxb. Corom. Pl. t.* 97. *Wight, Ic. t.* 1953, 1954. *Brand. For. Fl. t.* 58 *ad* 62. *Kl. et Garcke, Pr. Waldem. Reise, Bot. t.* 89, 90. *Thunb. Ic. Fl. Jap.* iv. *t.* 1. *Webb, Phytogr. Canar. t.* 215. *Hook. Fl. Bor. Amer. t.* 180 *ad* 182. *Torr. Fl. N. York, t.* 117 *ad* 120. *Hook. et Arn. Bot. Beech. Voy. t.* 26, 70. *Seem. Bot. Voy. Herald, t.* 10. *H. B. et K. Nov. Gen. et Sp. t.* 99 *ad* 102. *Leybold in Mart. Fl. Bras.* iv. i. *t.* 71, 72.

2. **Populus**, *Linn. Gen. n.* 1123.—**Amenta laxa, mascula sæpius pendula, floribus in utroque sexu sæpe breviter pedicellatis. Discus (an perianthium?) carnosulus v. membranaceus, breviter v. latiuscule cyathiformis, sæpe obliquus, integer dentatus v. irregulariter lobatus. Fl. ♂: Stamina ∞ (4–30), filamentis filiformibus liberis; antheræ sæpe majusculæ. Fl. ♀: Ovarium intra discum sessile, placentis 2–3, rarius 4; stylus brevis, ramis tot quot placentæ integris 2-fidisve; ovula in quaque placenta ∞, sæpe numerosissima; 2–∞-seriata. Capsula 2–3-valvis, rarius 4-valvis. Semina ordinis minima, coma sæpe longa densissimaque nivea.—Arbores ramulis teretibus angulatisve, gemmis squamosis sæpius resinosis. Folia alterna, petiolo haud raro a latere compresso tremula, sæpius lata, pennivenia et basi 3-nervia, integerrima dentata v. lobata, in una specie in eodem ramo sæpe valde heteromorpha; stipulæ angustæ, membranaceæ, fugaces. Amenta laxiora quam in *Salice*, fœminea interdum pedicellis elongatis laxe racemiformia. Bracteæ sæpe in stipitem contractæ, apice dilatatæ dentatæ v. ciliato-fimbriatæ, haud raro fugacissimæ.**

Species descriptæ 18, Europæ, Asiæ mediæ v. montanæ et borealis et Americæ borealis Mexico inclusa incolæ. *Wesmael in DC. Prod.* xvi. ii. 324. *Gærtn. Fruct. t.* 84*a* (98). *Nees, Gen. Fl. Germ. Monochlam. n.* 16. *Reichb. Ic. Fl. Germ. t.* 614 *ad* 619. *Hayne, Arzneig.* xiii. *t.* 46, 47. *Wats. Dendrol. Brit. t.* 102. *Pall. Fl. Ross. t.* 41. *Ledeb. Ic. Fl. Ross. t.* 479. *Royle, Ill. Himal. Bot. t.* 84. *Brand. For. Fl. t.* 63. *Nutt. N. Amer. Sylv. t.* 16. *Torr. Fl. N. York, t.* 121. *Hook. Ic. Pl. t.* 878.

Ordo CLXI. LACISTEMACEÆ.

Endl. Gen. 291. Lindl. Veg. Kingd. 329.

***Flores* hermaphroditi, sub squamis imbricatis spicæ tenuis cylindraceæ solitarii, 2-bracteolati. *Perianthium* 0 v. e segmentis 6 v. paucioribus distinctis inæqualibus linearibus setaceis v. spathulatis tenuibus interdum petaloideis. *Discus* carnosulus, nunc explanatus breviter sinuato-sublobatus, nunc concavus v. cupulatus genitalia includens, uno latere sæpius fissus. *Stamen* 1, disco affixum, a centro parum distans, filamento leviter complanato v. crassiusculo. Anthera ad apicem filamenti e loculis 2 distinctis sæpius**

divaricato-stipitatis, ovoideis, longitudinaliter dehiscentibus. *Ovarium* in centro disci superum, sessile v. brevissime stipitatum, 1-loculare, placentis 3 rarius 2 parietalibus intus vix prominentibus, stigmatibus 3 rarius 2 brevibus erectis coronatum. *Ovula* in quaque placenta 1–2, anatropa, pendula, pleraque tamen jam sub anthesi abortientia. *Capsula* ovoidea v. subglobosa, sæpius 3-quetra, 3-valvatim dehiscens, valvis coriaceis v. subcarnosis medio placentiferis. *Semen* in tota capsula abortu unicum (rarius 2–3 ?), obovoideo-oblongum, pendulum, testa crassiuscule membranaceo-coriacea, strato exteriore sæpius tenuiter carnosulo, exsiccatione testa subcrustacea apparet, strato exteriore in pelliculam tenuem plus minus detergibilem (arillam, auct. plur.) mutato. *Albumen* copiosum, carnosum. *Embryo* in centro albuminis quo parum brevior, rectus, radicula tereti supera, cotyledonibus latis foliaceis sibimet applicitis radiculæ subæquilongis.

Frutices v. arbusculæ. Folia alterna, breviter petiolata, integerrima, pennivenia; stipulæ 0. Spicæ graciles, breves, ad axillas sessiles, sæpius fasciculatæ. Squamæ imbricatæ, parvæ, latæ, concavæ. Bracteolæ ad basin pedicelli brevissimi lineari-subulatæ, nunquam deficere videntur. Perianthii segmenta quam maxime variabilia, squamam vix excedunt, sæpius 4–6 valde inæqualia, interdum minimam v. 0.

Species editæ 16, omnes Americæ tropicæ, a Brasilia et Peruvia usque ad Indiam occidentalem et Mexicum extensæ.

1. **Lacistema,** *Swartz, Prod.* 12; *Fl. Ind. Occid.* ii. 1091, *t.* 21. (Nematospermum, *Rich. in Act. Soc. Hist. Nat. Par.* 1792, 105. Synzyganthera, *Ruiz. et Pav.. Prod. Fl. Per. et Chil.* 137, *t.* 50; *Syst. Veg.* 273. Didymandra, *Willd. Spec.* iv. 971.)—Genus unicum. Character ordinis.

Species uti supra 16, *Alph. DC. Prod.* xvi. ii. 591. *Schnizl. in Mart. Fl. Bras.* iv. i. 281, *t.* 77 *ad* 81. *Mart. Nov. Gen. et Sp. Bras. t.* 94, 95. *Rudge, Pl. Gui. t.* 4 (*Piper*).

Genus nulli prope affine, ab auctoribus variis cum *Piperaceis*, *Chloranthaceis*, *Urticaceis* et *Samydaceis* comparatum, nuperque a Baillonio Hist. Pl. v. 275, sententia Lindleyana secuta, *Bixaceis* cum *Samydeis* adjunctum, ob capsulæ dehiscentiæ et placentationis similitudinem et semina a pluribus arillata dicta. Hic tamen character ex observatione imperfecta deductus est, et florum structura inflorescentiaque a *Samydaceis* longe recedunt. Nobis *Piperaceis* propinquius videtur, etsi ab his etiam pluribus notis distat, imprimis disco evoluto et embryone majore. Inflorescentia cum pluribus *Peperomiis* et *Symbryone* convenit. Ovarium 1-loculare placentis parietalibus in *Houttuynia* observatur, bracteolæ in *Symbryone*, perianthium in *Lactore*. In *Lacistemate* etiam perianthium deest in *L. grandifolio*, Schult., cui potius quam *L. myricoidi* verisimiliter referendum est *Piper fasciculare*, Rudge, Pl. Gui. t. 4. Discus in hac specie supra bracteolam magnus est, cupularis, hinc fissus sed nequaquam corolla dicendus.

Lozania, *Seb. Mut. Sem. Nov. Granad. ex DC. Prod.* iii. 30, est verisimiliter *Lacistematis* species male descripta. Si tamen stirpem alienam designat, ex charactere dato non recognoscenda est et nomen delendum.

Ordo CLXII. EMPETRACEÆ.

Endl. Gen. 1105. Lindl. Veg. Kingd. 285.

Flores unisexuales v. rarius polygami. *Perianthii* segmenta 4–6, subpetaloidea, valde imbricata sæpeque plus minus distincte 2-seriata. *Stamina* 2–3 rarissime 4, in flore ♂ centralia v. sub ovarii rudimenta, in flore ☿ hypogyna; filamenta filiformia v. crassiuscula, sæpe inæqualia, libera; antheræ dorsifixæ, loculis 2 ovoideis contiguis parallelis, rima longitudinali bivalvatim dehiscentibus. *Discus* 0. *Ovarium* in flore ♀ sessile, 2–∞- (usque ad 9-) loculare, globosum v. depressum. *Stylus* brevis v. columnaris, apice in ramos stigmatosos tot quot loculi integros dentatos v. bifidos mox radiato-patentes divisus. *Ovula* in loculis solitaria, angulo centrali lateraliter affixa, amphitropa, micropyle

infera. *Fructus* subglobosus, drupaceus, mesocarpio succulento, pyrenis 2–∞ 1-spermis in annulum collocatis. *Semina* angulo interiori lateraliter affixa, hilo lineari; testa tenuis. *Albumen* copiosum, carnosum. *Embryo* centralis, rectus, teres, albumine paullo brevior, cotyledonibus minimis cum radicula longa infera continuis.

Frutices ericoidei. Folia sparsa, sæpius conferta, parva, linearia v. oblonga, crassiuscula, subtus sulco profundo longitudinali notata, in pulvine brevissimo subarticulata. Stipulæ 0. Flores parvi, axillares v. in capitulum terminalem conferti. Drupæ parvulæ.

Species 4, regionum temperatarum hemisphærii borealis et montium elatiorum v. regionum frigidarum utriusque orbis incolæ.

Ordo distinctissimus, pluribus notis *Euphorbiaceis* nonnullis *Stenolobieis* accedit, sed longe distat habitu ericoideus; stipularum tamen absentia et præsertim radicula infera distincte separatur. Drupæ ∞-pyrenæ in *Euphorbiaceis* rarissimæ sunt, et flores polygami nusquam observantur.

De origine sulcæ paginæ inferioris foliorum confer Gibelli in Nuov. Giorn. Bot. Ital. viii. 49.

CONSPECTUS GENERUM.

1. Empetrum. Flores axillares, solitarii. Stamina 3. Gynœcium 6–9-merum.—*Reg. mont. et frigid. utriusque orbis.*

2. Corema. Flores ad apices ramorum conferti subcapitati. Stamina sæpius 3. Gynœcium sæpius 3-merum.—*Amer. bor., Eur. austro-occid., ins. Azores.*

3. Ceratiola. Flores axillares, 2–3-ni. Stamina 2. Gynœcium 2-merum.—*Amer. bor. civit. austr.*

1. **Empetrum,** *Linn. Gen. n.* 1100.—Flores subdioici, hermaphroditis plus minus perfectis sæpe intermixtis. Perianthii segmenta 6, 2-seriatim imbricata, exteriora suborbiculata, interiora longiora, obovato-oblonga, magis colorata. Stamina 3. Ovarium subglobosum v. vertice depressum, 6–9-loculare; stylus brevis, crassus, ramis stigmatosis tot quot loculi dilatatis radiato-patentibus plus minus dentatis bifidisve. Drupa succulenta fere baccata, pyrenis 6–9 obovoideo-triquetris in annulum collocatis axi centrali nullo distincto. Semina ordinis.—Frutex ericoideus, prostratus, ramosissimus. Folia sparsa, crebra, parva, obtusa, glabra v. lanato-ciliata et intra sulcum dorsalem pubescentia; squamæ ad basin innovationum imbricatæ, longe ciliatæ. Flores parvi, in axillis solitarii, brevissime pedicellati, bracteis 4 (ex Buchenau 5) imbricatis segmentis perianthii exterioribus similibus at gradatim minoribus stipati.

Species 1, regionum frigidarum et montium hemisphærii borealis in utroque orbe incola, etiam per Andes Americæ australis usque ad Americam antarcticam et insulam Tristan d'Acunha extensa, cæterum in hemisphærio australi deest. *A. DC. Prod.* xvi. i. 25. *Buchenau in Bot. Zeit.* 1862, 297. *Nees, Gen. Fl. Germ. Monochl. n.* 42. *Reichb. Ic. Fl. Germ. t.* 158. *Schnizl. Iconogr. t.* 241. *Bot. Reg. t.* 1783.

2. **Corema,** *Don in Edinb. N. Phil. Journ.* ii. (1826–7) 63. (Oakesia, *Tuckerm. in Hook. Lond. Journ.* i. 445. Tuckermannia, *Klotzsch in Wiegm. Archiv.* vii. 248. Euleucum, *Raf. ex A. DC.*)—Flores dioici. Perianthii segmenta 5–6, squamiformia, subpetaloidea, valde imbricata, exterioribus sæpe brevioribus latioribusque sed minus distincte 2-seriata quam in *Empetro*, florum ♀ breviora quam florum ♂. Fl. ♂: Stamina 3, rarissime 4. Ovarii rudimentum rarius plus minus evolutum. Fl. ♀: Ovarium subglobosum, 3- (rarius 2- v. 4-) loculare; stylus cylindraceus, apice in ramos totidem superne introrsum stigmatosos integros v. 2-fidos divisus. Drupa subglobosa, sæpius 3-pyrena. Semina ordinis.—Fruticuli ericoidei. Folia sparsa, conferta, lineari-teretia, subtus sulcata. Flores ♂ in capitula terminalia inter folia summa sessilia conferti, singuli ad axillam bracteæ v. folii floralis squamiformis sessiles, bracteolis tamen nullis extra perianthii lobos. Flores ♀ pariter capitati, sed ramo post anthesin excrescente fructus laterales evadunt.

Species 2, altera boreali-Americana, altera in Europa austro-occidentali et ins. Azores vigens. *A. DC. Prod.* xvi. i. 27. *Link et Hoffm. Fl. Port. t.* 72 (*Empetrum*). *Hook. Ic. Pl. t.* 531. *A. Gray, Chlor. Bor. Amer. t.* 1.

3. **Ceratiola,** *Mich. Fl. Bor. Amer.* ii. 221.—Flores dioici. Perianthii segmenta 4–6, squamiformia, subpetaloidea, valde imbricata, quarum 2–3 latissima, extimo breviore; 1–2 interiora sæpius minora v. angustiora, sed series 2 non rite distinguendæ. Stamina 2, absque ovarii rudimento in fl. ♂. Ovarium in fl. ♀ obovoideum, 2-loculare; stylus cylindraceus, in ramos stigmatosos 2–4 valde inæquales et interdum dentatos divisus. Drupa 2-pyrena. Semina ordinis.—Fruticulus ericoideus, ramis virgatis. Folia anguste linearia, subtus sulcata. Flores secus ramos numerosi, ad axillas 2–3-ni, sessiles, singuli bractea perianthii segmentis minore stipati, ebracteolati. Drupæ quam in *Empetro* et *Coremate* multo minores.

Species 1, Americæ borealis civitatum australiorum incola. *A. DC. Prod.* xvi. i. 27. *Pursh, Fl. Amer. Sept. t.* 13. *Bertol. Misc. Bot.* xiii. *t.* 1 (*Empetrum, male*). *Bot. Mag. t.* 2758.

ORDO CLXIII. CERATOPHYLLEÆ.

Endl. Gen. 267. Lindl. Veg. Kingd. 263.

Flores monoici, ad axillas sessiles, solitarii. *Perianthium* tenuiter herbaceum submembranaceum, æquale, ∞-partitum, segmentis (6–12) angustis subvalvatis apice sæpe dentatis v. laceris. *Flores* ♂: *Stamina* ∞ (10–20) in toro plano v. convexo conferta, filamentis brevissimis. *Antheræ* fere sessiles, erectæ, lineari-oblongæ, perianthium æquantes, loculis 2 linearibus parallelis adnatis rimis longitudinalibus extrorsum dehiscentibus, connectivo ultra loculos in appendicem crassum coloratum sæpius 2–3-dentatum producto. *Ovarii* rudimentum 0. *Flores* ♀: *Staminodia* 0. *Ovarium* 1, sessile, ovoideum, 1-loculare. *Stylus* cum ovario continuus breviter cylindraceus, in laminam longiusculam lineari-subulatam canaliculatamve v. sublanceolato-expansam (facie ? v. margine ?) stigmatosam productus, et ad basin laminæ interdum lobulo parvo auctus. *Ovulum* 1, pendulum, anatropum. *Fructus* nuceus, indehiscens, perianthio marcescente stipatus v. deciduo denudatus, ovoideus v. ellipsoideus, compressiusculus. *Pericarpium* coriaceum v. crustaceum interdum induratum, nunc læve obtusum v. styli basi persistente brevissime mucronatum, nunc styli basi elongata indurata apice aculeatum et basi aculeis utrinque divaricatis v. reversis 2-spinosum rarius 3-4-spinosum, v. ala angusta coriacea denticulata cinctum v. undique tuberculosum, lamina stigmatosa styli marcescente v. decidua. *Semen* ab apice loculi pendulum, testa membranacea. *Albumen* 0. *Embryo* rectus, cotyledonibus oblongis crassiusculis æqualibus, radicula supera brevissima, plumula valde evoluta jam in semine polyphylla.

Herbæ aquaticæ submersæ, ramis elongatis fluitantibus undique foliosis. Folia verticillata, 2-fida v. dichotome divisa, laciniis filiformibus v. lineari-complanatis rigidulis, sæpe dissite denticulatis. Flores in verticillo solitarii, ♂ et ♀ ad nodos diversos alterni v. nodi ♂ inferiores, ♀ superiores.

Species v. varietates insigniores 2, a variis auctoribus usque ad 8–10 multiplicatæ, ad aliis in unam junctæ, in aquis dulcis orbis fere totius vigentes.

Genus unicum distinctissimum a variis auctoribus ordinibus variis plus minus remotis frustra comparatum, et pro ordine proprio ab omnibus admissum. A. Gray tamen jam in Ann. Lyc. N. York, iv. 41 (1837), notavit embryonem *Nelumbonis* cum habitu *Cabombæ*, et forte *Ceratophyllum* revera pro forma valde depauperata *Nymphæacearum* habendum, cæteri tamen characteres longe discrepant.

1. **Ceratophyllum,** *Linn. Gen. n.* 1065. (Dichotophyllum, *Dill.*; *Mœnch. Meth.* 345.)—Genus unicum. Character ordinis.

Species uti supra 1 v. 2. *DC. Prod.* iii. 73. *W. et Arn. Prod. Fl. Penins.* 309. *Cham. in Linnæa*, iv. 503, *t.* 5. *Gærtn. Fruct. t.* 44. *Nees, Gen. Fl. Germ. Monochl. n.* 1 (*mediocriter*). *Schnizl. Iconogr. t.* 83 (*bene*). *Wight, Ic. t.* 1948.

Caruel in Nuov. Giorn. Bot. Ital. viii. 28, t. 3, acumen ovarii quod pro stylo cum lamine stigmatoso descripsimus, perianthii adnati limbum dixit, perianthium nostrum involucrum nuncupat, et stigma verum descripsit ad basin limbi (laminæ stigmatosæ) quod tamen in floribus pluribus in vivo iterum iterumque examinatis frustra quæsivimus, et lamina terminalis facie v. margine stigmatosa nobis apparuit, ut in iconibus citatis delineatur, meliusque a B. Clarke in Ann. Nat. Hist. ser. 2, xi. t. 14, f. 1 ad 3, et xii. t. 3, f. 5.

GYMNOSPERMEÆ.

Ordo CLXIV. GNETACEÆ.

Endl. Gen. 262. Lindl. Veg. Kingd. 232.

Flores unisexuales, sæpius dioici, intra bracteas oppositas v. rarius ternatim verticillatas sessiles, in spicas densas amentiformes v. interruptas dispositi. Fl. ♂: *Perianthium* tubuloso-clavatum v. laxum, apice valvatim 2-lobum v. uno latere fissum. *Staminum* filamenta in columnam v. tubum coalita; antheræ ad apicem columnæ v. tubi 2–8, sessiles v. breviter stipitatæ, subglobosæ, 1-3-loculares, vertice poris v. rimis brevibus 1–3 dehiscentes. *Ovulum* centrale sterile v. 0. Fl. ♀: *Ovuli* nucleus utriculo duplici v. triplici inclusus; exterior (perianthium?) carnosulus v. membranaceo-fibrosus, apice foramine parvo pervius; interior (ovuli integumentum?) membranaceus, nucleo breviter demum altius adnatus, superne liber, supra nucleum in tubum longum tenuem e foramine perianthii exsertum productus; intermedius dum adsit exteriore inclusus. *Nucleus* centralis, ovoideus v. oblongo-conicus, obtusus, apice pollen excipiens, intus ante fœcundationem solidus v. centro obscure cavus, post fœcundationem saccos amnioticos 1–2 continens. *Fructus* nunc drupaceus ovoideus v. oblongus, nunc membranaceo-compressus, pericarpio duplici v. simplici ex utriculo exteriore formato. *Semen* erectum, testa ex utriculo interiore cum strato exteriore nuclei formata, tubulo persistente sæpe coronata. *Albumen* tenue v. crassiusculum. *Embryo* rectus, albumine parum brevius, cotyledonibus sibimet applicitis radicula vix v. multo brevioribus.

Frutices rarius arbores, opposite foliati v. squamati v. ad truncum obconicum supra planum reducti. Folia v. squamæ dum adsint basi sæpius connata, ramis ad nodos sæpissime articulatis; stipulæ 0. Spicæ axillares v. terminales, nunc bractearum paribus arcte approximatis v. imbricatis amentiformes, nunc paribus distantibus interruptæ. Flores intra bracteas nunc utrinque solitarii, ad nodos oppositi, nunc ∞, 1-∞-seriatim verticillati. Staminum columnæ et ovulorum tubulæ ultra bracteas prominulæ.

Species ad 40, pleræque tropicæ, tam Americanæ quam gerontogeæ, paucæ in regionibus temperatis utriusque orbis extensæ.

Ordo distinctissimus, olim *Coniferis* adjunctus, a botanicis recentioribus iis rite approximatus et characteribus certis separatus.

CONSPECTUS GENERUM.

1. Welwitschia. Truncus lignosus, humilis, crassus, longævus, supra plano-truncatus, præter cotyledones longe accretas patentes aphyllus. Spicæ utriusque sexus imbricatæ, strobiliformes, multifloræ, ad margines trunci paniculatæ.—*Afr. trop., austro-occid.*

2. Ephedra. Frutices aphylli, ramis articulatis, squamis ad nodos oppositis in vaginulam connatis. Spicæ in axillis pedunculatæ v. ad apices ramorum paniculatæ, ♂ imbricatæ floribus in omnibus axillis oppositis, ♀ 1–2-floræ, squamis inferioribus laxis vacuis.—*Eur. austr., Reg. Mediterr., Asia et Amer. trop. et temp.*

3. Gnetum. Frutices rarius arbores, oppositifolii, ramis nodosis. Spicæ densæ v. interruptæ, axillares v. paniculatæ, floribus intra cupulam e squamis oppositis connatis ∞ pseudoverticillatis.—*Asia, Africa et Amer. intra tropicos.*

1. **Welwitschia,** *Hook. f. in Trans. Linn. Soc.* xxiv. i. *t.* 1 *ad* 14. (**Tumboa,** *Welw. olim in Diariis nonnullis Hortul.*)—**Flores** dioici, utriusque sexus **in spicis amentiformibus** intra bracteas squamiformes oppositas v. rarius **ternatim verticillatas quadrifariam** rarius sexfariam imbricatas solitarii, sessiles. **Fl. ♂: Perianthium laxe membranaceum,** compressum, breviter 2-lobum, lobis latis valvatis postico et antico, **bracteolis** 2 lateralibus carinatis perianthio vix brevioribus stipatum. **Staminum filamenta in tubum** laxum exsertum apice inter antheras truncatum alte connata; **antheræ 6, ad apicem columnæ** breviter stipitatæ, subglobosæ, vertice poris 3 mox in rimas breves confluentibus dehiscentes. Intra tubum adest utriculus membranaceus (ovuli integumentum, *Hook. f.*; **ovarium** imperfectum, *M'Nab*) in collum longe tubulosum flexuosum apice in discum **latum** concavum inter antheras dilatatum productus; intra utriculum nucleus ovoideus, **obtusus** v. breviter acuminatus, nucleo ovuli florum fœmineorum similis sed sterilis. **Fl. ♀:** Ovulum utriculo duplici inclusum; utriculus exterior (perianthium?) **planus, latus,** membranaceo-fibrosus, apice foramine minuto pervius, lateribus utrinque in **alam latam** tenuem squamæ amenti appressam dilatatis; interior (ovuli integumentum) **tenuiter** membranaceus, basi ovulo adnatus, superne ab eo liber, in tubum longum **flexuosum** superne subulatum e perianthio ultra squamas amenti longe exsertum vertice **minute** 2-dentatum productus; ovulum ipsum (ovuli nucleus) sessile, ovoideo-oblongum, obtusum. **Fructus** sub squamis amenti siccus, compressus, 2-alatus, utriculo exteriore floris ♀ aucto fibroso cæterum immutato, interiore membranaceo albumen laxe involvente. **Embryo** in centro albuminis granulosi linearis, teres, cotyledonibus 2 parvis sibimet arcte applicitis, radicula longiore supera apice carnoso-incrassata.—**Truncus** lignosus, longævus, **crasso-**conicus, vertice plano-truncatus, supra terram parum prominens, pedes plures **diametro** attingens, præter folia primordialia e cotyledonibus accreta aphyllus. **Hæc tamen ad** marginem trunci opposita, patentia, persistentia, demum pluripedalia et in **segmenta longa** dilacerata. E vertice plano trunci oriuntur **inflorescentiæ marginales aphyllæ, rigide** dichotome ramosæ, squamis oppositis ad dichotomias vaginantibus. **Spicæ amentiformes,** coloratæ, ♂ ad apices ramulorum v. in dichotomiis sessiles fasciculatæ, 1-1½ **pollicares,** ♀ pauciores, majores, crassiores, utplurimum breviter pedunculatæ. **Squamæ utriusque** sexus arcte imbricatæ, antheræ solæ in ♂, tubuli in ♀, e squamis prominentes.

Species 1, regionum aridarum Africæ tropicæ austro-occidentalis incola. *Parlat. in DC. Prod.* xvi. ii. 359 (partium interpretatione a nostra valde discrepante). *M'Nab, in Trans. Linn. Soc.* xxviii. 507. *t.* 40. *Strasb. Conif.* 141, *t.* 18 *ad* 20. De crystallis in ligno *Welwitschiæ* copiosissimis cfr. Solms-Laubach in Bot. Zeit. 1871, 509.

2. **Ephedra,** *Linn. Gen. n.* 1136. (Chætocladus, *Senil. sev Nels. Pin.* 161.)—**Flores** unisexuales, sæpius dioici, intra bracteas oppositas decussatim imbricatas **solitarii. Fl. ♂** in spicula ∞: Perianthium tenuiter membranaceum, laxum, apice breviter 2-lobum, **lobis** latis valvatis postico et antico, ebracteolatum. Stamina in fundo **perianthii affixa,** filamentis in columnam apice exsertam connatis; antheræ ad apicem **columnæ 2-8,** sessiles, 2-loculares, loculis vertice poro terminali mox in rimam extenso dehiscentibus. **Fl. ♀** in spicula intra bracteas summas, solitarii v. gemini, terminales, **bracteis exterioribus** vacuis: Ovuli nucleus sessilis, ovoideus, utriculis 2 apice foramine parvo **perviis inclusus;** utriculus exterior (perianthium?) carnosulus, apice breviter acuminatus; interior membranaceus, nucleo vix basi adhærens, ultra nuculam in tubulum tenuem longe **exsertum** superne 2-lobum v. uno latere fissum productus. **Fructus** drupaceus, oblongus, indehiscens, strato exteriore carnoso, interiore crustaceo v. indurato, **membrana intima** tenui hyalina (ovuli utriculo interiore) albumen involvente, sæpeque tubulo **persistente coronata.** Embryo albumine carnoso parum brevior, cotyledonibus oblongis **semiteretibus radicula** supera (in seminibus examinatis) vix brevioribus.—**Frutices** aphylli, erecti v. **scandentes,** fasciculato-ramosissimi, ramis nodosis articulatis, vaginis ad nodos minimis v. utrinque in squamulas lineares oppositas productis. **Florum** spiculæ parvæ, subglobosæ, in **axillis** vaginarum pedunculatæ v. ad apices ramorum paniculatæ. **Bracteæ spicularum ♂ omnes floriferæ.** In spiculis ♀ flos unicus terminalis subteres, v. flores 2 faciebus **interioribus complanatis sibimet arcte appliciti. Bracteæ exteriores vacuæ, decussatim imbricatæ,** v. in

speciebus nonnullis laxæ dilatatæ plus minus coloratæ. Flos terminalis spicularum ♂ interdum ♀ est, sed ut videtur imperfectus sterilisque.

Species descriptæ ad 30, sed imprimis a Miersio nimis multiplicatæ, Europæ australis, Africæ borealis, Asiæ temperatæ et subtropicæ et Americæ extratropicæ v. Andinæ a Bonaria et Chile usque ad Texam et Californiam incolæ. *C. A. Mey. Monogr. Ephedr. ex Mem. Acad. Petersb.* 1846, *cum tabb.* 8. *Parlat. in DC. Prod.* xvi. ii. 353. *Miers in Ann. Nat. Hist. ser.* 3, xi. 252; *Contrib. Bot.* ii. 164, *t.* 75 *ad* 79. *Strasb. Conif.* 132, *t.* 14 *ad* 17, 22. *L. C. Rich. Conif. t.* 4. *Nees, Gen. Fl. Germ. Monochl. n.* 13. *Reichb. Ic. Fl. Germ. t.* 539. *Wats. Dendrol. Brit. t.* 142. *Sibth. Fl. Græc. t.* 961. *Lange, Ic. Pl. Hisp. t.* 32. *Desf. Fl. Atl. t.* 253. *Pall. Fl. Ross. t.* 83. *Brand. For. Fl. t.* 69. *S. Wats. Bot.* 40 *Parall.* 328, *t.* 39. *Bertol. Misc. Bot.* xxiii. *t.* 3. *Tul. in Mart Fl. Bras.* iv. i. 404, *t.* 107.

3. **Gnetum,** *Linn. Mant.* 18, *n.* 1278. (Thoa, *Aubl. Pl. Gui.* ii. 874, *t.* 336. Abutua, *Lour. Fl. Coch.* 630.)—Flores unisexuales, sæpius dioici, intra cupulam e bracteis 2 oppositis connatis formatam ∞, sessiles, pseudoverticillati, singuli pilis articulatis v. pulvino velutino cincti v. semi-immersi. Fl. ♂: Perianthium lineari-clavatum, obtusum, integrum v. facile valvatim 2-fidum. Stamina in fundo perianthii affixa, filamentis in columnam apice ex ore exsertam connatis; antheræ 2, 1-loculares (v. loculi 2 antheræ unicæ), distinctæ, ad apicem columnæ sessiles, vertice 2-valvatim dehiscentes. Fl. ♀ perfecti: Ovuli nucleus sessilis, ovoideus v. globosus, utriculis 3 apice foramine parvo perviis inclusus; utriculus exterior (perianthium?) carnosulus, apice obtusus v. breviter acuminatus, uno latere plus minus fissus; secundus intermedius (andrœcium imperfectum ex *Beccari*) exteriore inclusus eoque paullo brevior; intimus (ovuli integumentum) tardius evolutus, nucleo basi adnatus, superne laxe membranaceus et ultra nuculam in tubulum tenuem longe exsertum apice sæpe dentatum v. fimbriatum productus. Fl. alii imperfecte ♀ quasi neutri: Nucleus (semper sterilis *Beccari*) utriculo duplici inclusus, utriculo utroque apice obtuso foramine parvo pervio, tubulo nullo exserto. Fructus drupaceus, ovoideus v. oblongus, indehiscens, strato exteriore tenuiter carnoso, interiore crustaceo v. indurato, membrana intima fibrosa ab exterioribus libera albumen laxe involvente (ex utriculo interiore et nuclei substantia formato, *Griff.*). Albumen copiosum, carnosum; embryo centralis, ovoideo-clavatus, radicula in filum sæpe longissimum intricato-flexuosum (a plerisque funiculum dictum) producta; cotyledones 2, breves.—Frutices alte scandentes v. rarius erecti v. arbores, nodosi, glabri. Folia opposita, coriacea, pennivenia. Flores parvi, perfecti utriusque sexus in verticillis et sæpius in stirpibus distinctis separati, ♂ in verticillis sæpe ∞-seriati, ♀ pauciores; verticilli nunc in spica interrupte nodosa dissiti, nunc in spicam densam conferti, spicis axillaribus terminalibusque solitariis fasciculatis v. paniculatis. Flores imperfecte ♀ seu neutri (in *G. Gnemone*, Linn., affinibusque) seriem interiorem formant verticillorum masculorum; in *G. scandente*, Roxb., affinibusque ut in speciebus Americanis nondum observati.

Species ad 15, pro maxima parte Asiæ et Americæ tropicæ incolæ, una tamen in Africa tropica a Welwitschio, altera in ins. Fiji maris Pacifici ab Harveyo detecta. *Griff. in Trans. Linn. Soc.* xxii. 299, *t.* 55, 56. *Blume, Rumphia,* iv. 1, *t.* 174 *ad* 176. *Parlat. in DC. Prod.* xvi. ii. 349. *Strasb. Conif.* 155, *t.* 21. *Welw. in Trans. Linn. Soc.* xxvii. 73. *Wight, Ic. t.* 1955. *Seem. Fl. Vit.* 434. *Beccari in Nuov. Giorn. Bot. Ital.* ix. 91, *t.* 7. *Hook. Kew Journ.* viii. *t.* 2, 3. *Brongn. in Duperr. Voy. t.* 1. *Tul. in Mart. Fl. Bras.* iv. i. 399, *t.* 102 *ad* 106.

Griffithii dissertatio optima supra citata ex observationibus repetitis ad vivum institutis instructa a Parlatorio uti a Tulasneo infeliciter prætervisa fuit. Floris præsertim fœminei evolutionem plane docet, ejusque conclusiones bene comprobantur ex observationibus Beccarii pariter in loco natali ad vivum institutis.

Abutua africana, Lour., cujus flores fructusque ignoti sunt, est verisimiliter a genere longe aliena et certe a *Gneto africano*, Welw., valde diversa, species cæterum nequaquam recognoscenda et ex enumeratione delenda.

Ordo CLXV. CONIFERÆ.

Endl. Gen. 258 ad 262, et Suppl. iv. ii. 1 (Cupressineæ, Abietineæ et Taxineæ), et Syn. Conif. Sangalli, 1847. Carrière, Traité Gen. des Conif. Paris, 1855. Henkel et Hochst. Syn. Nadelhölz. Stuttgardt, 1865. Strasburger Conif. und Gnet. Jena, 1872, cum tabb. 26. Pinaceæ et Taxaceæ, Lindl. Veg. Kingd. 226, 230.

Flores unisexuales, monoici v. dioici. *Perianthium* deest in utroque sexu. **Fl. ♂** (amenta ♂ *Parlat.*) solitarii, rarius spicati v. capitati. *Stamina* ∞, sæpius **numerosa**; filamenta alte connata (cum v. absque axe centrali), columnam globosam **ovoideam** oblongam v. sæpius cylindraceam formantia. *Antheræ* (flores ♂ *Parlat.*) circa **axin columnæ** breviter stipitatæ v. rarius sessiles, oppositæ decussatæque v. alternatim 3–4-natim verticillatæ, v. sæpius ∞-seriatim spiraliter confertæ; loculi (antheræ *Parlat.*) nunc 2–∞ inter se liberæ, ab apice stipitis v. a connectivo penduli, nunc 2 inter se plus minus connati et sæpe stipiti adnati, globosi ovoidei v. oblongo-lineares, rima longitudinali obliqua v. transversa deorsum introrsum v. lateraliter dehiscentes 2-valvesque. **Connectivum** (bractea *Parlat.*) ultra loculos sæpe in appendicem squamiformem productum, interdum vero inappendiculatum. *Pollen* globosum v. ellipsoideum in pluribus generibus imprimis in *Cupressineis* simplex, in aliis præsertim *Abietineis* utroque latere gibbo v. lobo globoso (vesiculo aerifero) auctum, sed vix semper in eadem tribu constans. **Fl. ♀** in spicas bracteatas amentiformes (*amenta*) dispositi v. supra bracteas squamiformes imbricatas solitarii; amenti squamæ oppositæ decussatæque v. alternatim 3–4-natim verticillatæ v. sæpius spiraliter confertæ ∞-seriatæ, specie simplices v. duplices polymorphæque, revera e laminis 2 compositæ, bractea et lamina ovulifera. *Bractea* sub anthesi sæpius magis conspicua quam lamina ovulifera, nunc fere a basi libera membranacea, post anthesin immutata v. parum aucta rarissime laminam seminiferam superans, nunc laminæ ovuliferæ alte adnata et cum ea post anthesin vario accreta, rarius jam sub anthesi lamina ovulifera brevior. *Lamina ovulifera* seu axis secundaria (a variis auctoribus *torus*, *discus*, *perianthium*, *involucrum* v. *ovarium apertum* dicta) ad axillam bracteæ eique basi v. sæpius omnino adnata, jam sub anthesi carnosa v. rarius tenuis, post ovuli fœcundationem mox accreta et valde polymorpha, formis insignioribus in characteribus tribuum quærendis. *Ovula* nuda, prope basin v. rarius infra apicem laminæ ovuliferæ affixa, sessilia v. basi laminæ subimmersa, erecta v. reversa, nunc in lamina solitaria nunc 2–∞ collateralia v. rarius irregulariter 2–3-seriata; integumentum exterius nucleo basi adnatum, superne liberum nucleum sæpius superans, cupulatum v. urceolatum, apice sub anthesi v. apertum v. pervium, post fœcundationem sæpius clausum; nucleus brevior, apice pollen accipiens, post fœcundationem interdum saccos amnioticos 2–3 continens. *Fructus* normalis strobilaceus, ex amento fœmineo formatus, squamis varie accretis sæpius induratis v. carnosis imbricatis supra semina arcte clausis, maturitate demum hiantibus et post semina delapsa diu persistentibus, rarius cum seminibus deciduis; in paucis generibus, floribus solitariis v. seminibus e bracteis immutatis longe exsertis, strobilus non evolvitur. *Semina* 1–∞, in lamina ovulifera varie aucta sessili v. in stipitem contracta sessilia, v. lamina adnata inclusa, erecta v. reversa, ovoidea v. oblonga, sæpe compressa, haud raro varie alata, in *Abietineis* laminam hyalino-scariosam e strato interiore laminæ ovuliferæ auferentia pseudosamaroidea; testa membranacea coriacea crustacea indurata v. drupacea, nuda v. lateraliter 2–3-alata, v. in alam terminalem producta semen revera samaroideum efficiens; integumentum interius sæpius testæ basi tantum adnatum, superne a testa liberum, albumini applicitum. *Albumen* copiosum, carnosum v. subfarinaceum, æquabile v. rarius ruminatum. *Embryo* (rarius embryones 2–3 in eodem semine) in centro albuminis rectus, sæpius angustus et subteres, radicula supera (ab hilo remota) brevi v. sæpe longiuscula, cotyledonibus 2–∞ æqualibus radicula brevioribus v. rarius longioribus.

Arbores rarius frutices, sæpissime sempervirentes; rami sæpe, ob gemmas quotannis ad

basin innovationis terminalis evolutas, pseudoverticillati, in aliis generibus sparsi. Folia sempervirentia v. in perpaucis generibus hieme decidua, opposita 3-natim rarius 4-natim verticillata v. subspiraliter alterna, nunc omnia v. saltem ramulorum floriferorum crassiusculo squamiformia, ramulis appressa v. imbricata, nunc omnia acicularia v. anguste linearia patentia et quaquaversa v. subdisticha, nunc in aliis ramulis squamiformia in aliis acicularia, rarissime e lanceolata ovata plana et coriacea, integerrima v. rarius minutissime serrulata v. lobata, in *Pino* valde anomala. Flores (rarius capitula) ♂ in gemmis v. ramulis terminalibus v. axillaribus sessiles, v. breviter pedicellati, bracteis parvis squamiformibus imbricatis sæpe stipati; columna staminea nunc parva subglobosa, nunc ovoidea oblonga v. dense cylindracea usque ad 1–2 poll. longa. Amenta ♀ sæpius terminalia, interdum gemmis floriferis brevissimis lateralia evadunt. Strobili nunc minimi, sæpe 1–3-pollicares, interdum 6–8-poll. diametro.

Species notæ ad 300, pro maxima parte per regiones temperatas v. montanas tam boreales quam australes utriusque orbis late dispersæ, interdum præsertim in hemisphærio boreali sylvas vastas constituentes, inter tropicos pauciores.

Ordo naturalis, nulli prope affinis nisi cæteris *Gymnospermeis* (*Gnetaceis Cycadeisque*). A Parlatore (in DC. Prod. xvi. ii. 363) *Casuarineis Betulaceis*que summopere accedere dicitur, verisimiliter ob similitudinem quamdam organorum vegetationis *Casuarinæ* et *Callitridis*, sed characteres florum et fructuum toto cælo distant. De horum structura multum disputatum est, et homologiæ nonnullæ adhuc dubiæ remanent. Apud auctores nonnullos, præsertim Parlatore in Prodromo, floris masculi columna staminea supra descripta est amentum ∞-florum, antherarum connectiva bracteæ dicuntur et loculi antheræ distinctæ nuncupati. Floris fœminei structuram veram bene indicavit R. Brown in Appendice ad King, Surv. Austral. ii. 554, et in pluribus speciebus optime illustravit L. C. Richard in opere posthumo Commentatione de Coniferis et Cycadeis, Stutgardiæ 1864, cum tabulis 29. Postea ovulum nudum a variis auctoribus in Prodromo citatis et a Parlatore ipso negatum est, lamina ovulifera nunc lepidium nunc involucrum dicta, ovuli integumentum exterius pro pistillo habitum et nucleus pro ovulo vero. De his variis sententiis præter opera citata confer—Zuccarini in Abhandl. Bay. Acad. Münch. iii. 753 cum tabb. 5. Baillon, Adansonia i. 1. Dickson in Edinb. N. Philos. Journ. ser. 2, xiii. 193. Eichler in Mart. Fl. Bras. iv. i. 435. Van Tieghem in Ann. Sc. Nat. ser. 5, x. 269, t. 13 ad 16. De floris ♂ homologia et structura confer imprimis Mohl, Verm. Schrift. 45, t. 1. De anatomia et structura *Coniferarum* optime tractatur in opere supra citato Strasburgii, cujus tamen conclusiones nonnullas negat Benth. in Proc. Linn. Soc. 1872-3, 11 (Address 1873, p. 4), nuperque quodammodo emendavit auctor ipse in Angiosp. et Gymnosp., Jena, 1879. *Coniferæ* præsertim cultæ illustrantur in operibus: Lambert, Pinus, ed. major, Londini, 1803, cum tabb. 43, et vol. ii. 1824, cum tabb. 11; ed. minor 1832, cum tabb. 81. Forbes, Pinetum Woburnense, Londini, 1839, cum tabb. 67. Gordon, The Pinetum, Londini, 1858, cum supplemento 1862. A. Murray, Pines and Firs of Japan, Londini, 1863, cum ic. xylogr. plur. Adnotationes etiam plures utilissimas accepimus a G. Engelmann in litt.

FORMÆ ABNORMES.

Ramuli phyllodinei in *Phyllocla*do et *Sciadopito*.

Folia lobata in *Gingko*, secundaria acicularia a primariis squamiformibus insigniter diversa in *Pino*, ramorum nonnullorum sterilium acicularia a squamiformibus ramulorum fertilium valde diversa in speciebus pluribus *Juniperi* et *Dacrydii*, hieme decidua in *Larice* et *Taxodio*.

Flores ♂ plures, capitati, in *Juniperi* sect. *Caryocedro*, in *Cephalotaxo* et in *Cunninghamia*.

Antherarum connectivum submuticum esquamatum in *Taxo*, *Saxegothea*, *Tsuga*, *Pseudotsuga*, *Abiete*, *Larice* perpaucisque aliis, vix appendiculatum in *Cephalotaxo*, *Torreya*, *Ginkgo*, *Pherosphæra*, *Podocarpo*.

In floribus ♂ monstruosis hinc inde præsertim in *Abietineis* perpaucis observatis, axis centralis superne squamas nonnullas irregulariter ovuliferas evolvit.

De floris ♂ formis valde diversis cfr. tribuum characteres.

Seminis albumen insigniter ruminatum in *Torreya*.

CONSPECTUS GENERUM.

SERIES A. *Ovula saltem sub anthesi erecta.*

Tribus I. Cupressineæ. Amenti ♀ squamæ 2–∞-seriatæ, in quaque serie oppositæ v. 3-natim rarius 4-natim verticillatæ. Ovula sub squamis fertilibus 2–∞, rarius 1. Folia ramulorum

fertilium opposita v. ternatim verticillata, sæpius parva crassa, squamiformis. **Lamina ovulifera bracteæ adnata, primum ea brevior, mox aucta, demum squamam fere totam efficiens, bracteæ** apice ad umbonem v. mucronem dorsalem reducto. Strobili squamæ excepta *Junipero*, **demum** apertæ, persistentes.

1. CALLITRIS. Strobili squamæ 4, 6 v. 8, omnes **fertiles**, ad normam **2-seriatæ, sed specie** 1-seriatæ, demum valvatim apertæ, dorso nudæ.—*Africa, Madagasc., Australia, N. Caled.*

2. ACTINOSTROBUS. Strobili squamæ 6 fertiles, ad normam 2-seriatæ, **sed specie 1-seriatæ** demum valvatim apertæ, singulæ dorso squamis exterioribus **vacuis 2-seriatim appressis** appendiculatæ.—*Australia.*

3. FITZROYA. Strobili squamæ 2–3 fertiles, 1-seriatim valvatæ, exterioribus **vacuis 1–2-**eriatis. Semina sub squama 2–3, 2–3-alata.—*Chile, Tasmania.*

4. LIBOCEDRUS. Strobili squamæ 2 fertiles, 2 exteriores et interdum 2 **intimæ vacuæ.** Semina sub squama 2, superne alata, samaroidea.—*Chile, N. Zel., N. Caled., China, Japonia, California.*

5. THUYA. Strobili ovoidei v. oblongi rarius subglobosi squamæ 2–6 (parium 1–3) **fertiles**, 2 rarius 4 exteriores et 2 intimæ vacuæ. Semina sub squama 2–3, rarissime 5, utrinque **alata** v. exalata. *Amer. bor., Asia or. extratrop.*

6. CUPRESSUS. Strobili globosi lignosi squamæ 4 v. 6 (parium 2–3) fertiles, 2 **rarius 4 exte**riores et interdum 2 intimæ vacuæ. Semina sub squama ∞, anguste 2-alata.—*Asia temp., Eur. austr. or., Amer. bor., Mexico.*

7. JUNIPERUS. Strobili globosi carnosi drupiformis v. bacciformis indehiscentis **squamæ** 2–6 fertiles. Semina in strobilo 1–6, testa dura, distincta v. in massam globosam **crassam** lignosam endocarpium simulantem conferruminata.—*Hemisph. bor. reg. extratrop. et mont.*

Tribus II. Taxodieæ. Amenti ♀ squamæ spiraliter confertæ. Ovula sub squamis fertilibus 2–6, erecta, in generibus 2 post anthesin obliqua horizontalia v. subreversa. **Folia** spiraliter affixa quaquaversa v. disticho patentia. Lamina ovulifera bracteæ adnata, demum ut in *Cupressineis* valde aucta, squamam fere totam efficiens, rarius sub semine maturo immutata parvaque.

8. CRYPTOMERIA. Lamina ovulifera adnata apice digitatim 5-fida. Ovula 3–6. Strobili squamæ ob lobos laminæ ovuliferæ et bractearum apices prominentes echinatæ.—*Japonia, China.*

9. TAXODIUM. Lamina ovulifera margine integra. Ovula 2. Strobili **squamæ apice** lignosæ, dilatatæ, truncatæ, dorso vix medio umbonatæ v. mucronatæ, semina **includentes.**—*Amer. bor., Mexico, China.*

10. SEQUOIA. Lamina ovulifera margine integra. Ovula 3–6, sæpius 5, **post anthesin sæpe** horizontalia v. subreversa. Strobili squamæ apice lignosæ, in **discum crassum dorso medio** depressum vix mucronatum dilatatæ.—*California.*

11. ATHROTAXIS. Omnia *Sequoiæ* nisi squamarum strobili apex **dorso mucrone v. umbone** conico instructus.—*Australia.*

12. CEPHALOTAXUS. **Lamina ovulifera parva,** cum bractea post **anthesin vix aucta.** Ovula 2. Semina magna, drupiformia, e squamis longo exserta.—*Japonia, China (Asia trop.?).*

Tribus III. Taxeæ. Amenti ♀ squamæ imbricatæ, omnes præter terminalem **vacuæ** v. plures fertiles. Lamina ovulifera a bractea libera, sessilis v. longe stipitata, apice perfecte v. imperfecte annularis v. cupulata v. ovulum involvens. Ovulum in lamina v. in quoque lobo **laminæ** 1, erectum v. post anthesin obliquum.

13. TAXUS. Amentum ♀ 1-florum. Lamina ovulifera primum annularis, mox **cupulata,** carnosa, demum bacciformis, semen includens at non ei adnata, vertice aperta. **Antheræ post** anthesin umbraculiformes, loculis in circulum connatis.—*Utriusque orbis hemisph. bor.*

14. TORREYA. Amentum ♀ 1-florum. Lamina ovulifera primum cupularis, **mox ovarium** includens, demum semini arcte adnata. Albumen insigniter ruminatum. **Antherarum loculi** in semicirculum connati.—*Amer. bor., Japonia, China bor.*

15. GINKGO. Amenta ♀ v. gemmæ squamatæ 1-floræ. Lamina ovulifera **longe stipitata,** apice breviter 2-∞-fida, lobis in annulum seu cupulam brevem semini **adnatam dilatatis.** Antherarum loculi 2, penduli. Folia petiolata, subflabellata, incisa.—*China.*

16. PHYLLOCLADUS. Amenta ♀ parva, ∞-flora. Lamina ovulifera primum **annularis, mox cupulata, semini appressa. Antherarum loculi 2, contigui. Ramuli ultimi phyllodinei,** coriacei, dilatati, subflabellati.—*Tasmania, N. Zel., Archipel. Malay.*

17. Dacrydium. Spicæ ♀ 1-6-floræ. Lamina ovulifera late concava v. cupulata, latere interiore aperta, mox squamam oblique superans, a semine libera. Antherarum loculi 2, globosi, contigui.—*Archip. Malay., ins. maris Pacif., N. Caled., N. Zel., Tasmania, Chile.*

18? Pherosphæra. Amenta ♀ parva, ∞-flora. Lamina ovulifera tenuis ovulum involvens? v. 0? Antherarum loculi 2, globosi, contigui.—*Tasmania.*

Series B. *Ovula jam sub anthesi arcte reversa.*

Tribus IV. Podocarpeæ. Amenti ♀ squamæ perpaucæ v. ∞, sæpe carnosæ, spiraliter confertæ. Ovulum 1, ab apice squamæ v. laminæ ovuliferæ reversum. Lamina ovulifera sessilis v. stipitata, nunc ovulo nunc squamæ adnata (v. 0?). Antherarum loculi 2, contigui, adnati.

19. Microcachrys. Amentum ♀ parvum, squamis ∞-seriatis semiglobosis. Ovulum ab apice squamæ reversum (lamina ovulifera dubia). *Folia parva, opposita, decussatim imbricata.—Tasmania.*

20. Saxegothæa. Amentum ♀ subglobosum, squamis pauciseriatim imbricatis. Ovulum 1, reversum. Lamina ovulifera carnosa, bracteæ adnata, mox valde accreta. Strobilus indehiscens? bractearum apicibus muricatus. Folia sparsa v. distiche patentia.—*Chile.*

21. Podocarpus. Amenti ♀ 1-2-flori squamæ paucæ, pedunculo adnatæ, cum quo sæpius carnosæ. Lamina ovulifera e squama exserta, plus minus stipitata, ovulum reversum includens eique adnata.—*Amer. austr., Afr. trop. et austr., Asia trop. montana, Australasia, Japonia.*

Tribus V. Araucarieæ. Amenti ♀ squamæ numerosissimæ ∞-seriatæ spiraliter imbricatæ, specie simplices, lamina ovulifera bracteæ arcte adnata. Ovula 1–6, medio v. infra medium squamæ collateraliter affixa, reversa. Semina exalata v. lateraliter alata, nec ala spuria samaroidea.

* *Lamina ovulifera tenuis, apice linea parum prominula v. apiculo parvo terminata.*

22. Cunninghamia. Antherarum loculi 2–4. Lamina ovulifera squama multo brevior. Ovula 3. Semina ala augusta cincta.—*Japonia, China.*

23. Agathis. Antherarum loculi 5–∞. Lamina ovulifera squama multa brevior. Ovula 1 rarius 2. Semina uno latere v. utrinque late alata.—*Archip. Malay., ins. maris Pacif., N. Caled., N. Zel., Australia.*

24. Araucaria. Antherarum loculi 6–∞. Lamina ovulifera squama vix brevior. Ovulum 1. Semen squamæ adnatum utrinque alatum v. exalatum. *Amer. austr., Australia, Nov. Caled., ins. maris Pacifici.*

** *Lamina ovulifera demum valde aucta indurata, in strobilo lignoso squamam fere totam efficiens.*

25. Sciadopitys. Antherarum loculi 2. Ovula 7–9. Folia vera minute squamiformia, scariosa, sparsa. Phyllodia foliis *Pini* similia, in pseudoverticillis distinctis numerosa.—*Japonia.*

Tribus VI. Abietineæ. Amenti ♀ squamæ *duplices*, lamina ovulifera a bractea libera v. basi tantum adnata, demum valde aucta, in strobilo sæpius sola conspicua. Ovula 2, prope basin squamæ affixa, reversa. Semina ala spuria (e strato interiore squamæ soluta) samaroidea, rarius ala decidua v. vix evoluta denudata v. nuda.

26. Pinus. Folia primaria minima, squamiformia, scariosa, sparsa, secundaria longiuscule v. longe acicularia, per 2–5 intra vaginam scariosam fasciculata. Flores ♂ ad basin innovationum subspicati, antherarum connectivo sæpius in appendicem squamiformem producto. Strobili squamæ persistentes.—*Hemisph. borealis.*

27. Cedrus. Folia acicularia, subtetragona, rigidula, in gemma squamata dense subverticillato-fasciculata, v. in innovationibus sparsa. Flores ♂ in fasciculo solitarii, antherarum connectivo in appendicem squamiformem producto. Strobili magni squamæ arcte imbricatæ demum deciduæ.—*Mont. Africæ bor. et Asiæ mediæ et occid.*

28. Picea. Folia sparsa, cum petioli basi persistente articulata, subtetragona, rigidula. Flores ♂ ad axillas solitarii, antherarum connectivo in appendicem squamiformem producto. Strobili reflexi squamæ persistentes, bractea subtendente parva sæpius occulta.—*Hemisph. bor. reg. extratropicæ.*

29. Tsuga. Folia *Abietis*, nisi basi persistente leviter prominula. Flores ♂ *Abietis*. Strobili reflexi squamæ persistentes, bractea subtendente parva.—*Asia or. extratrop., Amer. bor.*

30. Pseudotsuga. Folia et flores ♂ *Abietis.* Strobili reflexi squamæ persistentes, bractea subtendente conspicua, apicula centrali squamam superante.—*Amer. bor. occid.*

31. Abies. Folia sparsa, cicatricem non prominentem relinquentia, linearia, supra plana. Flores ♂ ad axillas solitarii, antherarum connectivo ultra loculos umbonato v. vix prominulo. Strobili erecti squamæ cum seminibus deciduæ, bractea subtendente conspicua, apicula centrali squamam sæpe æquante v. superante.—*Hemisph. bor. reg. extratrop.*

32. Larix. Folia tenuia, decidua, in gemma squamata dense subverticillato-fasciculata, v. in innovationibus sparsa. Flores ♂ in gemma squamata aphylla solitarii, antherarum connectivo ultra loculos haud v. vix prominulo. Strobili reflexi squamæ persistentes, bractea subtendente conspicua, squama breviore v. eam æquante.—*Hemisph. bor. reg. extratrop.*

GENERA EXCLUSA.

Ephedra et Gnetum, olim *Coniferis* adscripta, hodie ad ordinem distinctum **Gnetacearum** referuntur, supra, 433.

Altingia, *Noronha*, a Korn. et Sims, Ann. Bot. ii. 325, ad *Coniferas* relata, et postea a Loudon et Don perperam *Araucariæ*, Juss., substituta, est **Hamamelideæ**, supra, i. 669.

Tribus I. Cupressineæ.

1. **Callitris**, *Vent. Decad. Gen. Nov.* 1808, 10. (**Frenela**, *Mirb. in Mém. Mus. Par.* xiii. 30.)—**Flores in ramis diversis monoici v. rarius dioici, ♂ ad apices ramulorum intra folia summa subsessiles, solitarii gemini v. rarius 3-4-ni. Staminum columna tenuis; antheræ spiraliter confertæ, subverticillatæ, stipite brevi; connectivi appendicula squamiformis ovata v. deltoidea, basi truncata v. orbiculata peltataque; loculi 2-4, sub appendicula fere occulti, deorsum 2-valves. Amenta ♀ in ramulis abbreviatis solitaria v. fasciculata; squamæ 4, 6 v. rarius 8, plus minus distincte 2-seriatæ, lamina ovulifera adnata fere ad apicem incrassatæ. Ovula ad basin cujusve squamæ ∞, erecta, circa conum centralem v. apicem 3-angulatum v. 3-lobum rhacheos sessilia, 2-3-seriata. Strobilus globosus ovoideus v. pyramidatus, maturus squamis induratis persistentibus erecto-patentibus quasi valvatim dehiscens, valvis 4, 6 v. rarius 8 omnibus æqualibus v. 3 alternis minoribus margine leviter exterioribus. Semina perfecta ∞, absque alis oblonga, testa tenuiter crustacea, late 2- rarius 3-alata; albumen parcum; cotyledones 2, rarius 3; semina interiora sæpius imperfecta exalata v. semialata, v. intima omnino abortiva columnæ centrali adnata.—Arbores fruticesve, ramulis teretibus v. 3-4-angulis interdum articulatis. Folia 3-4-natim verticillata v. decussatim opposita, rarius demum sparsa, ramorum sterilium v. plantæ junioris interdum acicularia, sæpissime tamen ad squamas minutas crassas carinatas reducta, carinis in angulos ramulorum decurrentibus. Strobilorum valvæ apertæ, post semina delapsa diu persistentes.**

Species ad 14, Africæ, Madagascariæ, Australiæ et Novæ Caledoniæ incolæ. *L. C. Rich. Conif.* 46. *Hook. f. in Hook. Lond. Journ.* iv. 145.

Genus in integrum servatum naturale et bene definitum, in sectiones sequentes imprimis numero partium cujusve verticilli et patria distinctas dividitur.

1. *Pachylepis.* Squamæ ramorum majorum sæpius alternæ v. irregulariter oppositæ, ramulorum fructiferorum fructiferæque ipsæ sæpissime oppositæ. Strobili crasse lignosi, subæqualiter 4-valves, squamis tamen omnino ut in *Tetraclinæ* decussatim oppositis. Species 3, quarum 2 Africæ australis, tertia Madagascariæ incolæ, omnes inter se valde affines. Pachylepis, *Brongn. in Ann. Sc. Nat. ser.* 1, xxx. 189. Parolinia, *Endl. Gen. Suppl.* i. 1372. Widdringtonia, *Endl. Syn. Conif.* 31. *Schlecht. in Linnæa*, xxxiii. 339, *t.* 1. *Parlat. in DC. Prod.* xvi. ii. 442.

2. *Tetraclinis.* Squamæ ramorum 4-natim verticillatæ, ramulorum fructiferorum fructiferæque ipsæ decussatim oppositæ. Strobili quam in *Pachylepide* minus indurati, subæqualiter 4-valves. Rami ramulique fragilissimi. Species 1, Africæ boreali-occidentalis incola. Callitris, *Spach, Suites Buff.* xi. 342. *Parlat. in DC. Prod.* xvi. ii. 452, *non Vent.* *L. C. Rich. Conif. t.* 8. *Vahl, Symb.* ii. *t.* 48 (*Thuia*). *Desf. Fl. Atl. t.* 252 (*Thuia*).

3. *Hexaclinis.* Squamæ ramorum fructiferorum fructiferæque ipsæ ternatim verticillatæ. Strobili subæqualiter 6-valves, v. valvæ 3 subexteriores paullo minores. Species 9, quarum 1 Novo-Caledonica, ceteræ Australianæ. Callitris, *Vent. Decad. Gen. Nov.* 10. *L. C. Rich. Conif. t.* 18. Frenela, *Spach, Suites Buff.* xi. 345. *Parlat. in DC. Prod.* xvi. ii. 445. *Hook. f. Fl. Tasm. t.* 97.

Benth. Fl. Austral. vi. 235. *F. Balansæ*, Brongn. et Gris in Bull. Soc. Bot. Fr. xvi. 327, est certe eadem ac *F. sulcata*, Parlat. *F. subumbellata*, Parlat., est ejusdem specimen sterile foliis acicularibus quaternis, ramulis tamen nonnullis superioribus omnino normalibus squamis brevibus angulatis ternatis.

4. *Octoclinis.* Squamæ omnes 4-natim verticillatæ. Strobili subæqualiter 8-valves, v. valvæ 4 subexteriores vix minores. Species 1, Australiana. *Benth. Fl. Austral.* vi. 235 (*Frenela*). OCTOCLINIS, *F. Muell. in Trans. Phil. Inst. Vict.* ii. 21 *cum ic.* LEICHHARDTIA, *Shcph. Cat. Pl. Cult. Sydn.* 1851, *ex F. Muell.*

Genus a Ventenatio l.c. conditum fuit beneque definitum ad speciem quamdam Australianam ab auctore non nominatam, foliis squamisque fructiferis ternatim verticillatis, et nomen a κάλλος et τρεῖς derivavit ob insignem symmetriam partium numero ternario. L. C. Richard primus *Thuiam articulatam*, Vahl., nomine *Callitris quadrivalvis* salutavit, synonymo falso (v. inedito?) Ventenatii allato, ab omnibus auctoribus sequentibus repetito. Mirbel nomen *Frenelæ* pro *Callitride* substituit ob similiter sonantem *Calytrix*, Labill., et species Africanas cum Australiensibus inclusit. Spach primus nomen Mirbelii ad Australianas typicas limitavit, nomine Ventenatii infeliciter ad Africanas translato.

2. **Actinostrobus,** *Miq. in Pl. Preiss.* i. 644.—Flores in diversis ramis monoici (v. interdum dioici ?), ♂ axillares v. terminales, sessiles, solitarii. Staminum columna oblonga; antheræ spiraliter confertæ, 6-fariam ternatim verticillatæ; connectivi appendicula squamiformis orbiculata v. acuminata, plus minus peltata, loculis 4–6 sub appendice deorsum parum prominulis 2-valvibus. Amenta ♀ globosa, in ramulis brevibus solitaria; squamæ ternatim verticillatæ, arcte 6-fariam imbricatæ; exteriorum series ∞ vacuæ, latæ, concavæ, intus haud incrassatæ, 6 intimæ (serieum 2 intimarum) subæquales, fere valvatæ, intus lamina ovulifera adnata valde incrassatæ. Ovula ad basin squamarum intimarum solitaria v. gemina, erecta. Strobilus ovoideo-globosus v. acuminatus, maturus squamis intimis auctis parum induratis 6-valvatim dehiscens, squamis exterioribus vacuis tenuibus parum auctis in dorso fertilium arcte appressis 6-fariam superpositis ad quamquam squamam solitariis v. 2–3 ab extimis in intimas gradatim majoribus. Semina perfecta pauca, obovoidea v. triquetra, testa crustacea duriuscula late 2–3-alata; albumen tenue; embryo tereti-clavatus, cotyledonibus 2 radicula sublongioribus.—Frutices ramosissimi. Folia ternatim verticillata, pleraque minima, squamiformia, rigida, acuta v. rarius obtusa, squarroso-patentia v. appressa, ramorum sterilium interdum elongata, acicularia. Flores ♂ in *A. pyramidali* ad axillas sessiles, in *A. acuminata* terminales. Strobili sæpius circa ½ poll. diametro.

Species 2, Australiæ austro-occidentalis incolæ. *Benth. Fl. Austral.* vi. 239. *Hook. Ic. Pl. t.* 1272.

3. **Fitzroya,** *Hook. f. in Journ. Hort. Soc.* vi. 264, *et in Bot. Mag. t.* 4616. (Diselma, *Hook. f. Fl. Tasm.* i. 353, *t.* 98. Cupresstellata, *Senil. seu Nels. Pin.* 60.)—Flores dioici, ♂ ad apices ramulorum intra folia summa sessiles. Staminum columna brevis; antheræ spiraliter confertæ, stipite tenui sæpius brevi; connectivi appendicula squamiformis late ovata v. orbiculata, peltata, superne dorso sæpius valde convexa; loculi 2–4 sub appendice occulti v. inferne prominentes, deorsum 2-valves. Amenta ♀ terminalia, subglobosa, sessilia, solitaria; squamæ oppositæ v. ternatim verticillatæ, 2-3-seriatæ, seriei exterioris vix a foliis superioribus distinctæ, seriei intermediæ majores coloratæ basi intus incrassatæ sed vacuæ, seriei interioris adhuc majores, fertiles, intus lamina ovulifera adnata ultra medium v. fere ad apicem carnoso-incrassatæ; amenti rhachis in columnam brevem oblongam (squamarum seriei quartæ rudimentum) producta. Ovula ad basin squamarum fertilium 2-3, erecta. Strobilus parum auctus, globosus, squamis fructiferis induratis demum hiantibus diu persistentibus, apice lamina ovulifera aucta dilatatis extus subplanis, infra apicem bracteæ apice umbonatis. Semina squamis vix breviora, testa crustacea oblonga late 2–3-alata; embryo normalis.—Arbores fruticesve sempervirentes, ramosissimi. Folia parva, ternatim verticillata v. decussatim opposita, laxe v. appresse imbricata. Strobili 2–4 lin. diametro.

Species 2, altera typica montium Chile australis vix Patagoniæ incola, arborea, foliis amentique ♀ squamis sæpius ternatim verticillatis interdum vero oppositis, antheris sæpius 4-locularibus

ovulis ternis seminibus 2-alatis. *Parlat. in DC. Prod.* xvi. ii. 463. *Lemaire, Illustr. Hortic.* i. *Misc.* 30 *cum ic.* *Fl. des Serres* vii. 130, *cum ic. a Bot. Mag. repetita*; altera Tasmanica, pariter montana, *F. Archeri*, Benth., frutescens, erecta, foliis amentique ♀ squamis oppositis decussatis, antheris sæpius 2-locularibus, ovulis geminis rarius ternis, seminibus 3-alatis. *Benth. Fl. Austral.* vi. 240 (*Diselma*). Numerus partium vix semper constans videtur et characteres essentiales in utraque specie eidem.

4. **Libocedrus**, *Endl. Syn. Conif.* 42.—Flores monoici v. dioici, ♂ terminales, solitarii. Staminum columna intra folia ultima subsessilis, globosa v. ovoidea; antheræ decussatim oppositæ, ∞-seriatæ, stipite brevi; connectivi appendicula squamiformis late ovata v. orbiculata, leviter peltata; loculi sæpius 4, subglobosi, deorsum 2-valves. Amenta ♀ subglobosa ovoidea v. oblonga, in ramulis brevibus solitaria; squamæ 4, rarius 6, decussatim oppositæ, breviter v. longe acuminatæ, pauciseriatæ, paris infimi breviores v. angustiores vacuæ, paris sequentis majores, ovatæ v. oblongæ, floriferæ; summæ vacuæ in 2 tantum speciebus adsunt; fertiles fere ad apicem lamina ovulifera adnata carnoso-incrassatæ. Ovula ad basin squamarum fertilium sæpius 2, erecta. Strobilus ovoideus v. oblongus, squamis induratis ovoideis v. oblongis sub apice bracteæ apice nunc brevissime acuminatis nunc longe cornutis, in strobilo maturo hiantibus post semina delapsa diu persistentibus apice sæpius recurvis. Semina samaroidea, testa coriacea oblonga superne uno latere in alam longam obliquam membranaceam erectam producta, latere altero rarius angustissime alata; embryo normalis.—Arbores sempervirentes, habitu *Thuyæ*. Folia squamiformia, opposita, quadrifariam imbricata, nunc omnia æqualiter decussata appressa v. patentia, nunc in ramulis complanatis lateralia alte carinata, facialia planiora v. plana minoraque. Strobili maturi 4-8 lin. longi.

Species bene notæ 8, quarum 2 Chilenses, 2 Novo-Zelandicæ, 1 Novo-Caledonica, 1 Japonica, 1 Chinensis, 1 Californica. *Parlat. in DC. Prod.* xvi. ii. 453. *Brongn. et Gris in Bull. Soc. Bot. Fr.* xviii. 140. *Hook. Lond. Journ.* i. *t.* 18, ii. *t.* 4, iii. *t.* 4 (*Thuya*). *Pœpp. et Endl. Nov. Gen. et Sp.* iii. *t.* 220 (*Thuya*).

Genus *Thuyæ* nimis affine, imprimis seminibus samaroideis superne 1-alatis distinguitur, et quoad species pleræque defectu squamarum strobili interiorum sterilium. Species inter se formas valde diversas exhibent. Folia in *L. chilense*, *L. Doniana*, *L. decurrente* et *L. macrolepide* in ramulis complanatis dimorpha, lateralia late carinata, facialia parva plana, in *L. tetragona* et *L. Bidwilli* omnia æqualiter decussata. Strobili squamæ in *L. Doniana*, *L. tetragona* et *L. Bidwilli* dorso longe cornutæ, in *L. chilense*, *L. decurrente* et *L. macrolepide* sub apice minute mucronatæ.

Heyderia, *C. Koch, Dendrol.* ii. ii. 179 (*L. decurrens* e California), et Calocedrus, *S. Kurz in Trim. Journ. Bot.* 1873, 196, *t.* 133 (*L. macrolepis* e prov. Yunan Chinæ), seminibus et characteribus essentialibus *Libocedri*, a cæteris speciebus differunt squamis interioribus strobili bene evolutis etsi vacuis, et fere medium tenent inter *Thuyam* et *Libocedrum*.

5. **Thuya**, *Linn. Gen. n.* 1078 (Thuja).—Flores monoici, ♂ terminales solitarii. Staminum columna intra folia ultima subsessilis, parva, subglobosa; antheræ decussatim oppositæ, sæpius 2-3-seriatæ, stipite brevi; connectivi appendicula squamiformis orbiculata, leviter peltata, staminum superiorum interdum minima; loculi 2-4, subglobosi, deorsum 2-valves. Amenta ♀ ovoidea v. oblonga, in ramulis brevibus solitaria; squamæ decussatim oppositæ, ∞-seriatæ, paris infimi rarius parium 2 inferiorum vacuæ sæpiusque breviores, parium 1-8 intermediorum majores floriferæ, paris intimi v. rarissime 2 intimorum angustæ, vacuæ, haud raro basi connatæ, fertiles introrsum pro maxima parte lamina ovulifera adnata carnoso-incrassatæ. Ovula ad basin squamarum fertilium 2-3 rarius 5, erecta. Strobilus ovoideus v. oblongus, rarius globosus, squamis coriaceis induratis vix tamen lignosis sæpius oblongis sub apice bracteæ apice mucronulatis, v. apice crasso-conicis mucrone obliterato, in strobilo maturo laxiusculis, post semina delapsa diu persistentibus. Semina sub squamis fertilibus 2-3, rarius 4-5, testa coriacea oblonga utrinque in alam latam v. angustam expansa v. exalata; embryo normalis.—Arbores fruticesve sempervirentes. Folia parva, opposita, squamiformia, appressa, quadrifariam imbricata, omnia subæqualia v. sæpius in ramulis complanatis lateralia alte carinata, facialia planiora v. plana minoraque. Strobili maturi rarius semipollicem longitudine excedunt.

Species ad 12, Americæ borealis et Asiæ orientalis extratropicæ incolæ, quarum 2 in hortis diu cultæ, in sectiones 5 apud auctores nonnullos genera propria distribuendæ, characteribus vix valorem specificum excedentibus. Genus cæterum *Cupresso* valde affine, differt ramis (cum foliis) sæpius nec semper complanatis, strobilis minoribus minus induratis, et ovulis paucis.

1. *Euthuya.* Strobili maturi ovoideo-oblongi cernui squamæ parum incrassatæ, 2 tantum ut in *Libocedro* fertiles. Semina late subæqualiter 2-alata, sub quaque squama 2 v. 3. Species typica Linnæi, boreali-Americana. *L. C. Rich. Conif. t.* 7, *f.* 1. *Mich. N. Amer. Sylv. t.* 156. *Wats. Dendrol. Brit. t.* 150. *Nees, Gen. Fl. Germ. Monochl. n.* 11, *pro parte.*

2. *Macrothuya.* Strobili squamæ fertiles 4 v. 6. Seminum alæ angustiores quam in *T. occidentali.* Cætera *Euthuyæ.* Species 2, altera boreali-Americana, *Nutt. N. Amer. Sylv. t.* 111; altera Japonica.

Thuya, qualis a Parlatorio in DC. Prod. xvi. ii. 456 limitatur, includit *Euthuyam* et *Macrothuyam.*

3. *Thuyopsis.* Strobili maturi globosi suberecti squamæ incrassatæ, duræ, fertiles 4–6 v. rarissime 8. Semina anguste 2-alata, sub quaque squama sæpius 4 v. 5. Species Japonica. *Lamb. Pin. ed. min. t.* 68. Thuyopsis, *Sieb. et Zucc. Fl. Jap.* ii. 32, *t.* 119, 120. *Parlat. in DC. Prod.* xvi. ii. 460.

4. *Biota.* Strobili junioris globosi subcarnosi maturi subovoidei duri squamæ fertiles sæpius 4. Semina exalata, sub quaque squama 2 v. 3, testa duriuscula. Species v. varietates 2, in Japonia et China boreali indigenæ, in Asia et Europa frequenter cultæ. *Lamb. Pin. ed. min. t.* 76. *L. C. Rich. Conif. t.* 7, *f.* 2. *Forbes, Pin. Wob. t.* 63. *Bot. Reg.* 1842, *t.* 20. *Nees, Gen. Fl. Germ. Monochl. n.* 11, *pro parte. Sieb. et Zucc. Fl. Jap. t.* 117, 118. Biota, *Endl. Syn. Conif.* 46. *Parlat. in DC. Prod.* xvi. ii. 461.

Platycladus, *Spach, Suites Buff.* xi. 333, includit *Thuyopsin* et *Biotam.*

5. *Chamæcyparis.* Strobili maturi globosi duri squamæ apice incrassato-dilatatæ, fertiles 4 v. 6. Semina late v. rarius anguste 2-alata, sub quaque squama 2. Ramuli complanati, foliis facialibus parvis *Thuyæ*, v. folia decussatim imbricata *Cupressi.* Strobili quam in *Cupresso* multo minores et squamæ 2-ovulatæ omnino *Thuyæ.* Species 6, Americanæ et Japonicæ. *L. C. Rich. Conif. t.* 8. Cupressi sp. *Lamb. Pin. t.* 43; *ed. min. t.* 66. *Wats. Dendrol. Brit. t.* 156. *Trautv. Imag. Pl. Ross. t.* 7. *Bot. Mag. t.* 5581. *Mich. N. Amer. Sylv. t.* 152. Chamæcyparis, *Spach, Suites Buff.* xi. 329. *Parlat. in DC. Prod.* xvi. ii. 463. *Maxim. in Bull. Acad. Sc. Petersb.* x. 489; *Mel. Biol.* vi. 25. Chamæpeuce, *Zucc. in Endl. Enchir.* 139, *et in Lindl. Veg. Kingd.* 229, *non DC.* Retinospora, *Sieb. et Zucc. Fl. Jap.* ii. 36, *t.* 121 *ad* 123.

6. **Cupressus,** *Linn. Gen. n.* 1079.—Flores in ramis diversis monoici, ♂ terminales, solitarii v. rarius gemini. Staminum columna intra folia summa subsessilis, oblonga v. cylindracea; antheræ decussatim oppositæ, stipite brevi; connectivi appendicula squamiformis, ovata v. orbicularis, plus minus peltata, loculis 2–6 sub appendicula deorsum prominentibus 2-valvibus. Amenta ♀ in ramulis brevibus solitaria v. rarius fasciculata, globosa; squamæ 3–6-seriatim oppositæ, seriei exterioris et interdum intimæ steriles, fertiles sæpius 4 v. 6, sub anthesi late ovatæ, introrsum pro maxima parte lamina ovulifera adnata carnoso-incrassatæ. Ovula ad basin squamarum fertilium ∞, sæpe numerosa, erecta. Strobilus globosus, lignosus, squamis valde incrassatis extrorsum peltato-dilatatis, dorso bractearum apicibus sæpe umbonatis v. breviter muricatis, ante maturitatem arcte clausis, demum apice solutis hiantibus, post semina delapsa diu persistentibus. Semina oblonga, testa coriacea v. leviter indurata utroque latere anguste rarius late in alam expansa; embryo normalis, cotyledonibus 2, rarius 3–4.—Arbores interdum excelsæ v. frutices sempervirentes. Folia sæpius ut in *Juniperi* sect. *Sabina* parva, squamiformia, adnato-decurrentia, apice appressa v. breviter patentia, opposita, decussatim imbricata, ramorum sterilium v. plantæ junioris rarius aciculari-patentia, in una tamen specie omnia subulata, patentia. Strobili sæpe pollicem diametro.

Species ad 12, Asiæ temperatæ, Europæ austro-orientalis, Americæ borealis et Mexici incolæ. *Parlat. in DC. Prod.* xvi. ii. 467. *Lamb. Pin. t.* 42, *ed. min. t.* 65. *L. C. Rich. Conif. t.* 9. *Forbes, Pin. Wob. t.* 61, 62. *L'Hér. Stirp. Nov. t.* 8. *Nees, Gen. Fl. Monochl. n.* 10. *Reichb. Ic. Fl. Germ. t.* 534. *Wats. Dendrol. Brit. t.* 155. *Pall. Fl. Ross. t.* 53.

7. **Juniperus,** *Linn. Gen. n.* 1134.—Flores monoici v. dioici, ♂ solitarii v. rarius 3–6 in capitulum conferti. Staminum columna sessilis v. breviter stipitata; antheræ spiraliter

arcte approximatæ v. laxius distincteque oppositæ v. 3-natim verticillatæ, stipite brevi nunc brevissimo rarius tenui; connectivi appendicula squamiformis, ovata v. peltata; loculi 2-6, sub appendicula occulti v. deorsum prominentes, 2-valves. Amenta ♀ globosa; squamæ 2-3-seriatim oppositæ v. ternatim verticillatæ, jam sub anthesi pro maxima parte lamina ovulifera adnata incrassato-carnosæ et arcte contiguæ, mox valde auctæ carnosæ et supra ovula undique concretæ. Ovula sub quaque squama serieum 1-2 intimarum solitaria v. gemina, erecta, sub anthesi libera, mox squamis auctis clausis operta. Strobilus e squamis conferruminatis carnosis fibrosis v. succulentis drupiformis v. bacciformis, extus lævis v. bractearum apicibus v. squamarum marginibus prominulis notatus. Semina 3-6 v. abortu pauciora, intra fructum inclusa v. (ex *Engelm.*) rarius leviter prominula, nunc distincta testa crasse coriacea indurata v. ossea, nunc in massam globosam crassissime lignosam putamen simulantem perfecte conferruminata, nucleis singulis in locellis distinctis separatis; albumen membrana inclusum et embryo normales; cotyledones sæpius 2, interdum 3 vidimus, et in *J. californica* fide Engelmanni usque ad 5.—Frutices v. arbores sempervirentes. Folia opposita v. ternatim verticillata, parva adnato-decurrentia v. patentia et linearia v. acicularia. Flores v. spicæ terminales v. ramulo florifero ad fasciculum foliorum minimorum reducto axillares. Strobili cærulei v. rubri, a pisi ad nucis magnitudinem variant.

Species ad 25, per hemisphærium boreale late dispersæ, in regionibus temperatis frigidisque frequentes, inter tropicos non nisi in montibus utriusque orbis obviæ. *Parlat. in DC. Prod.* xvi. ii. 475. *Endl. Syn. Conif.* 8.

Genus ab Endlichero in sectiones 3, apud nonnullos pro generibus propriis habendas, divisum est:—

1. *Sabina.* Folia omnia v. saltem ramorum fructiferorum parva, squamiformia, opposita et decussatim imbricata, rarissime ternatim verticillata, ramorum sterilium v. plantæ junioris rarius acicularia. Flores ♂ solitarii, terminales, connectivorum appendicibus squamiformibus imbricatis loculos obtegentibus. Semen unicum v. 2 distincta. *L. C. Rich. Conif. t.* 6. *Forbes, Pin. Wob. t.* 64, 65. *Andr. Bot. Rep. t.* 534. *Hook. Lond. Journ.* ii. *t.* 1. *Reichb. Ic. Fl. Germ. t.* 536. *Guss. Pl. Rar. t.* 62. *Vis. Ill. Pl. Nov. in Mem. Instit. Venet.* vi. *t.* 1*, 1**. *Pall. Fl. Ross. t.* 55 *ad* 57. *Trautv. Imag. Pl. Ross. t.* 15. *Sieb. et Zucc. Fl. Jap. t.* 126, 127. *Mich. N. Amer. Sylv. t.* 155. *Newb. Bot. Williams. Exped. t.* 10.

2. *Oxycedrus.* Folia acicularia v. linearia, plus minus patentia, ternatim verticillata. Flores ♂ ad axillas solitarii, basi bracteis parvis stipati (ramulo florifero axillari ad fasciculum bractearum reducto), connectivorum appendicibus basi parum productis, loculis prominentibus quasi dorsalibus. Semina sæpius 3, distincta, nunc abortu pauciora. *L. C. Rich. Conif. t.* 5. *Nees, Gen. Fl. Germ. Monochl. n.* 12. *Reichb. Ic. Fl. Germ. t.* 535, 537. *Moggr. Fl. Ment. t.* 65. *Ten. Fl. Nap. t.* 247. *Pall. Fl. Ross. t.* 54. *Sieb. et Zucc. Fl. Jap. t.* 125. *Webb. Phytogr. Canar. t.* 217.

3. *Caryocedrus*, Endl. Folia acicularia *Oxycedri*. Flores ♂ pariter axillares, sed 3-6 in capitulum conferti, per anthesin laxe patentes, singuli bractea parva lineari-lanceolata subtensi. Staminum columna in quoque flore stipitata, antheris 9-12, connectivorum appendicibus ovatis incurvis laxe imbricatis basi non peltatis locellis magnis stipiti infra appendicem affixis. Strobili drupiformes, in genere magni. Semina in massam globosam crassissime lignosam putamen 2-6-locularem simulantem arcte conferruminata. Species unica, orientalis. *Labill. Dec. Pl. Syr.* ii. *t.* 8. Arceuthos, *Ant. et Kotschy in Œstr. Bot. Wochenbl.* 1854, 219.

Thujacarpus. *Trautv. Imag. Pl. Ross.* 11, *t.* 6, genus propositum fuit ad plantam in horto Nikitensi cultam sub nomine *Juniperi oblongi*, Bieb., speciei partim ad *J. communem* partim ad *J. oxycedrum* ab auctoribus relatæ. Ex icone, strobili descripti imperfecti et quodammodo monstruosi videntur.

Tribus II. Taxodieæ.

8. **Cryptomeria,** *Don in Trans. Linn. Soc.* xviii. 166, *t.* 13, *f.* 1.—Flores monoici, ♂ in axillis summis subsessiles, squamis paucis imbricatis stipati, spicam brevem interruptam formantes. Staminum columna oblonga, sessilis; antheræ spiraliter confertæ, stipite brevi; connectivi appendicula squamiformis lata, peltata, imbricata; loculi 3-5, sub appendicula occulti, penduli, deorsum 2-valves; antheræ 2-3 infimæ sæpius

imperfectæ, appendicula minore. Amenta ♀ subglobosa, intra folia summa sessilia; squamæ per anthesin arcte imbricatæ, spiraliter pauciseriatæ, ultra medium lamina ovulifera adnata apice digitatim 5-fida carnoso-incrassatæ. Ovula sub quaque squama 3–6, erecta, 3-quetra v. nonnulla (sterilia?) compressa. Strobilus globosus; squamæ induratæ, sublignosæ, superne incrassato-dilatatæ, dorso bracteæ apice et laminæ ovuliferæ lobis induratis echinatæ, basi in stipitem contractæ, demum hiantes et post semina delapsa persistentes. Semina erecta, testa coriacea medio oblonga in alas laterales 2–3 angustas dilatata; embryo normalis.—Arbores sempervirentes, ramis patentibus. Folia spiraliter conferta, anguste lineari-falcata, incurvo-erecta, 3–4-gona, angulo dorsali prominente adnato-decurrente. Capitula seu amenta ♀ sub anthesi terminalia, interdum fasciculo foliorum ad apicem rhacheos excrescente carnosa. Strobili ½–1 poll. diametro.

Species 1, Japoniæ et Chinæ borealis incola, sæpe tamen in China australi nuperque in aliis regionibus culta. *Parlat. in DC. Prod.* xvi. ii. 437. *Sieb. et Zucc. Fl. Jap.* ii. *t.* 124 *et* 124 *b*. *Hook. Ic. Pl. t.* 668.

9. **Taxodium,** *L. C. Rich. in Ann. Mus. Par.* xvi. 298; *Conif.* 143, *t.* 10. (Schubertia, *Mirb. in Nouv. Bull. Soc. Philom.* iii. 123. Glyptostrobus, *Endl. Syn. Conif.* 69. Cuprespinnata, *Senil. seu Nels. Pin.* 61.)—Flores monoici, ♂ in ramulis hornotinis subaphyllis squamellatis numerosi, racemoso-spicati, singuli pedunculo brevissimo imbricato-squamato fulti. Staminum columna oblonga, intra bracteas subsessilis; antheræ spiraliter confertæ, stipite brevi; connectivi appendicula lata, membranacea, basi truncata v. vix peltata, loculi 4–5 (3–9 ex Parlat.), a stipite penduli, deorsum 2-valves. Amenta ♀ in ramulo annotino sparsa, sessilia, globosa; squamæ arcte confertæ, spiraliter imbricatæ, apice ovato-patentes, infra medium lamina ovulifera adnata carnoso-incrassatæ. Ovula 2, a basi squamæ erecta. Strobilus auctus, induratus, globosus v. obovoideus; squamæ præcipue e lamina ovulifera valde aucta constantes basi in stipitem contractæ, apice lignoso valde dilatato orbiculato mutua pressione angulato v. late ovato, extus medio bracteæ apice umbonato v. mucronato et marginem versus linea curva tuberculorum sæpe notato, v. rarius omnino lævi; squamæ maturitate hiantes, post semina delapsa persistentes. Semina majuscula; testa incrassata coriacea v. subsuberosa, extus nitida, irregulariter 3-angulata v. subalata, basi brevissime contracta v. in stipitem hinc alatum contracta.—Arbores laxe ramosæ, ramulis patentibus v. pendulis. Folia decidua v. subpersistentia, alterna, subspiraliter affixa, nunc linearia distiche patentia, nunc rarius parva, appressa, squamiformia. Florum ♂ racemi sæpius plures subpaniculati. Amenta ♀ pauca, sub anthesi parva.

Species 3, quarum 2 typicæ, Americæ borealis et Mexici incolæ, strobilis maturis globosis usque ad pollicem diametro, seminibus irregulariter 3-quetris subalatis vix basi contractis. *Parlat. in DC. Prod.* xvi. ii. 440. *Lamb. Pin. ed. min. t.* 63. *Forbes, Pin. Wob. t.* 60. *Nutt. N. Amer. Sylv. t.* 151 (*Cupressus*). *Ten. in Mem. Acad. Ital. Moden.* xxv. ii. 200, *cum tabb.* 2. *Bot. Mag. t.* 5603 (*Glyptostrobus*); species tertia Chinensis (*T. heterophyllum*, Brongn.), strobilis maturis obovoideis basi longe contractis, seminibus vix angulatis basi in stipitem hinc alatum contractis. Amenta ♀ florida et habitus omnino varietatum nonnullarum *T. distichæ*. Flores tamen ♂ adhuc ignoti, etsi arbor jam diu hinc inde in hortis culta. Pro genere proprio a Parlat. in DC. Prod. xvi. ii. 438 sub nomine *Glyptostrobi* retinetur.

10. **Sequoia,** *Endl. Syn. Conif.* 197. (Wellingtonia, *Lindl. Gard. Chron.* 1853, 823. Washingtonia, *Winsl. ex Hook. Kew Journ.* vii. 29. Gigantabies, *Senil. seu Nels. Pin.* 77.)—Flores monoici, ♂ in summis axillis v. ad apices ramulorum solitarii, squamis imbricatis stipati. Staminum columna oblonga v. subglobosa, intra squamas imbricatas pedicellata v. subsessilis; antheræ spiraliter confertæ, stipite tenui, loculis 2–4, sæpius 3, ab apice stipitis pendulis deorsum 2-valvibus, connectivo in appendicem ovatam incurvam basi truncatam v. vix peltatam producto. Amenta ♀ terminalia, ovoidea v. oblonga, squamæ arcte confertæ, spiraliter imbricatæ, pluriseriatæ, basi in stipitem crassum contractæ, dorso obtuse carinatæ, carina in acumen producta; lamina ovulifera arcte

adnata, crasse carnosa, bractea brevior at jam sub anthesi multo latior, post anthesin valde aucta. Ovula sæpius 5, primum ad basin squamæ erecta, post anthesin, squama basi accrescente, linea transversa curva infra apicem laminæ ovuliferæ affixa, reversa v. subhorizontalia. Strobilus valde auctus, ovoideus v. breviter oblongus, indurato-lignosus; squamæ præcipue e lamina ovulifera aucta constantes, basi in stipitem contractæ, apice in discum crassum orbiculatum v. transverse oblongum medio depressum et (bracteæ apice?) mucronatum dilatatæ, demum hiantes, persistentes. Semina horizontalia v. reversa, compressa, testa crassiuscule membranacea v. tenuiter crustacea, utrinque in alam angustissimam dilatata; embryo normalis, 3–6-cotyledoneus.—Arbores giganteæ, sempervirentes, dense ramosæ. Folia alterna, spiraliter affixa, in *S. sempervirente* sæpius sublanceolata et distiche patentia, in *S. gigantea* sæpius multo breviora obtusiora et undique appresse imbricata, sed folia utriusque formæ in utraque specie interdum observantur. Strobili ½–1½-pollicares.

Species 2 Californicæ. *Parlat. in DC. Prod.* xvi. ii. 435. *Lamb. Pin. ed. min. t.* 64 (*Taxodium*). *Bot. Mag. t.* 4777, 4778 (*Wellingtonia*), *ic. in Fl. des Serres t.* 892, 893, *iteratæ*. *Dcne. in Rev. Hort. ser.* 4, iv. 10 et 11, *fig.* 1, 2.

In *S.* (*typica*) *sempervirente*, flores ♂ sæpius ad apices ramorum 2–3 spicam brevem formant, singuli squamis bracteisve paucis imbricatis stipati v. rarius ramulo brevissimo foliato fulti, amentum ♀ in eodem ramulo terminale, spica mascula arcte approximatum, in aliis ramulis flores ♂ soli adsunt. In *S.* (*Wellingtonia*) *gigantea*, flores ♂ ad apices ramulorum solitarii, terminales, intra folia summa subsessiles; in hac spica amenta ♀ florentia non vidimus. In utraque specie strobili terminales apparent, in *S. gigantea* multo majores durioresque quam in *S. sempervirente*. Arbores tamen bene congeneres videntur quod jam anno 1853 indicavit Decaisne l.c. et fere in eodem tempore Torrey ex A. Gray in Sill. Journ. ser. 2, xviii. 287. De magnitudine et duratione harum arborum confer *A. Gray in Sill. Journ. ser.* 2, xvii. 440; *et Address, Sequoia*, 1872.

11. **Athrotaxis**, *Don in Trans. Linn. Soc.* xviii. 171, *t.* 13, 14 (*errore* **Arthrotaxis**, *auct. fere omn.*).—Flores monoici, ♂ ad apicem ramulorum solitarii. Staminum columna brevis, inter folia summa subsessilis; antheræ laxe subspiraliter confertæ, stipite tenui, loculis 2 ab apice stipitis pendulis longiusculis deorsum 2-valvibus, connectivo in appendicem squamiformem late ovatam non v. vix peltatam producto. Amenta ♀ subglobosa, terminalia; squamæ ∞-seriatim spiraliter imbricatæ, basi contractæ; lamina ovulifera carnosa, bracteæ adnata eaque sub anthesi multo brevior, mox aucta. Ovula 3–6, primum ad basin squamæ erecta, mox squama basi accrescente infra apicem laminæ ovuliferæ collateralia, horizontalia v. reversa. Strobilus globosus, induratus, sublignosus; squamæ præcipue e lamina ovulifera aucta constantes, basi in stipitem contractæ, apice incrassatæ, bracteæ apice prominente conico breviter acuminatæ v. dorso umbonatæ, demum hiantes, persistentes. Semina horizontalia v. reversa, compressa, absque alis anguste oblonga, testa subcrustacea utrinque æqualiter v. inæqualiter anguste v. latiuscule in alam expansa; embryo normalis, sæpius 2-cotyledoneus.—Arbores sempervirentes, coma ramosissima denso foliata. Folia parva, spiraliter conferta, dense v. laxe imbricata, nunc brevissima obtusa appressa, nunc laxiora, lanceolata. Strobili sæpius ½–¾-poll. diametro.

Species 3, Tasmanicæ. *Benth. Fl. Austral.* vi. 241. *Hook. Ic. Pl. t.* 559, 573, 574. Genus quoad flores et fructum *Sequoiæ* valde affine et vix a specie typica nisi patria et strobili squamis evidentius acuminatis distinguendum.

12. **Cephalotaxus**, *Sieb. et Zucc. Fam. Nat. Fl. Jap.* ii. 108; *Fl. Jap.* ii. 65, *t.* 130 *ad* 132.—Flores dioici, ♂ ∞ (6–9), in capitula axillaria globosa bracteis squamiformibus imbricatis involucrata conferti, singuli bractea squamiformi subtensi. Staminum columna brevis, subsessilis: antheræ paucæ (4–∞), stipite brevi; loculi 2–4, circa apicem stipitis reflexi, intus subdeorsum dehiscentes, connectivo ultra loculos in appendicem brevem sursum incurvam producto. Amenta ♀ ovoidea, ad apices ramorum sæpius terna; singula intra bracteas squamiformes imbricatas sessilia v. breviter pedunculata. Squamæ floriferæ ∞, spiraliter confertæ, lanceolatæ v. triangulares, mox modice incrassatæ carnosulæ, dorso convexo-carinatæ, lamina ovulifera cum bractea arcte connata, intus

sæpe costa media prominula instructa, post anthesin sæpius immutata. Ovula sub quaque squama 2, erecta. Amenta fructifera squamis parum auctis vix strobiliformia. Semina magna, drupiformia, e squamis demum marcescentibus omnino exserta, ovoidea v. oblonga; testa drupacea, extus carnosa, intus dura; albumen carnosum; embryo normalis, 2-cotyledoneus.—Arbores fruticesve sempervirentes. Folia alterna, subspiraliter affixa, distiche patentia, brevissime petiolata, linearia, plana, iis *Taxi* similia nisi longiora. Semina drupiformia, sæpius semipollicaria.

Species editæ 4, quarum 3 Japonicæ, 1 Chinensis, inter se tamen valde affines et forte unius varietates. *Parlat. in DC Prod.* xvi. ii. 502. *Forbes, Pin. Wob. t.* 66 (*Taxus*). *Bot. Mag. t.* 4499. Illis forte addenda specimina quoad habitum et folia simillima a Griffithio in Indiæ provinciis orientalibus lecta et alia a Miquelio indicata e Sumatra, in his omnibus tamen flores et fructus ignoti, et genus adhuc dubium remanet. Genus *Cephalotaxus* ab auctoribus plerisque ad *Taxeas* relatum, sed florum structura tam ♂ quam ♀ omnino *Taxodiearum*. Semen exsertum drupiforme primo intuitu fructum *Torreyæ* refert, sed ni fallimur, stratus exterior carnosus in *Cephalotaxo* est testæ pars, dum in *Torreya* e lamina ovulifera adnata oritur. Amenta ♀ in *Cephalotaxo* ∞-flora squamis 2-ovulatis, in *Torreya* 1-flora, 1-ovulata.

Tribus III. Taxeæ.

13. **Taxus,** *Linn. Gen. n.* 1135. (Verataxus, *Senil. seu Nels. Pin.* 168.)—Flores dioici, ♂ ad axillas solitarii, subsessiles, bracteis nonnullis squamiformibus imbricatis stipati. Staminum columna breviter stipitata, turbinato-globosa; antheræ 5–8, ante dehiscentiam subglobosæ, supra depressæ, 4–6-sulcatæ, stipite brevi, loculis 4–6 circa apicem stipitis connatis, subtus introrsum dehiscentibus; anthera effœta fere umbraculiformis, 4–6-lobus, connectivo inappendiculato v. vix in media anthera brevissime mucronulato. Amenta ♀ axillaria, sessilia, 1-flora (v. rarissime 2-flora?), squamis vacuis ∞ latis arcte imbricatis superioribus gradatim majoribus fere in cupulam confertis; lamina ovulifera intra squamam summam ab ea libera, sub anthesin annularis vix prominens, mox aucta, cupulata, truncata, demum semine longior. Ovulum 1, intra laminam ovuliferam erectum. Semen maturum ovoideo-globosum, lamina ovulifera aucta carnosa pulposa bacciformi apice truncata fere ad apicem v. omnino inclusum, ab ea tamen præter basin liberum; testa dura sublignosa, extus in vivo viscoso-subcarnosa; embryo normalis, 2-cotyledoneus.—Arbores rarius frutices sempervirentes. Folia subspiraliter affixa, sæpissime distiche patentia, brevissime petiolata, linearia, plana, sæpe falcata. Fructus lamina exterior bacciformis ad 3 lin. diametro, apice ore parum contracto aperta.

Species apud auctores nonnullos 6–8, ab aliis omnes in unam coadunatæ, per regiones temperatas hemisphærii borealis in utroque orbe late dispersæ. *Parlat. in DC. Prod.* xvi. ii. 500. *L. C. Rich. Conif. t.* 2. *Zucc. in Abhandl. Bay. Acad. Münch.* iii. 803, *t.* 5. *Nees, Gen. Fl. Germ. Monochl. n.* 14. *Reichb. Ic. Fl. Germ. t.* 538. *Wall. Tent. Fl. Nap. t.* 44. *Sieb. et Zucc. Fl. Jap. t.* 128. *Nutt. N. Amer. Sylv. t.* 108.

14. **Torreya,** *Arn. in Ann. Nat. Hist. ser.* 1, i. 130. (Caryotaxus, *Zucc.*; *Henk. et Hochst. Nadelh.* 365. Fœtataxus, *Sen. seu Nels. Pin.* 167.)—Flores dioici, ♂ ad axillas solitarii, subsessiles, bracteis nonnullis squamiformibus decussatim imbricatis stipati. Staminum columna intra bracteas subsessilis, ovoidea v. oblonga; antheræ ∞-seriatim spiraliter confertæ, stipite brevi, loculis 4 ab apice pendulis basi (supera) in semi-annulum connatis, introrsum 2-valvibus, connectivo supra loculos breviter producto parum dilatato margine superiore sæpius denticulato. Amenta ♀ axillaria, sessilia, 1-flora, squamis vacuis parvis carnosulis 3–4-fariam imbricatis post anthesin immutatis; lamina ovulifera intra squamam summam ab ea libera, sub anthesi cupularis ovulum æquans, mox aucta, urceolata, supra ovulum clausa, crasse carnosa. Ovulum intra laminam 1, erectum. Fructus ovoideus, drupiformis, lamina carnosa e cupula aucta constans semen includens eique plus minus adnata. Seminis testa ossea; albumen insigniter ruminatum; embryo parvus, 2-cotyledoneus.—Arbores sempervirentes. Folia subspiraliter affixa, distiche patentia, brevissime petiolata, linearia, plana, iis *Taxi* similia nisi longiora. Fructus ¾–1½-pollicaris.

Species 3 v. 4, Americæ borealis, Japoniæ et Chinæ borealis incolæ. *Parlat. in DC. Prod.* xvi. ii. 504. *Hook. Ic. Pl. t.* 232, 233. *Bot. Mag. t.* 4780. *Sieb. et Zucc. Fl. Jap. t.* 129. *Nutt. N. Amer. Sylv. t.* 109. *Newb. Pl. Williams. Exped.* 62, *cum ic. xyl.*

15. **Ginkgo,** *Linn. Mant.* 313. (Salisburia, *Sm. in Trans. Linn. Soc.* iii. 330. Pterophyllus, *Senil. seu Nels. Pin.* 163.)—Flores dioici, ♂ ad axillas squamarum solitarii, pedunculati, ebracteati; staminum columna laxe cylindracea; antheræ subspiraliter confertæ, stipite tenui, loculis 2 ab apice stipitis pendulis longiusculis fere a basi distinctis introrsum dehiscentibus, connectivo supra loculos vix brevissime appendiculato. Flores ♀ in gemma squamata (an semper ?) solitarii. Lamina ovulifera in axilla squamæ ab ea libera, basi in stipitem longum contracta, apice breviter 2-fida rarius irregulariter 3–6-fida, lobis in discum seu cupulam brevem ovulo adnatam dilatatis. Ovula in quoque lobo solitaria, sessilia, erecta. Semen drupaceum, basi lobo laminæ ovuliferæ parum aucto adnatum; testæ stratus exterior carnoso-pulposus, interior durus fere osseus; embryo normalis, 2-cotyledoneus. — Arbor sempervirens, pallida, ramis patentibus, ramulis biformibus, foliiferi novelli sæpius penduli, foliis alternis distantibus, floriferi ad nodos tardius evoluti v. etiam terminales crassi, brevissimi, post annos plures parum elongati. Folia primaria ramorum sterilium v. novellorum longe petiolata, subrhombeo-flabelliformia, inciso-2-loba v. irregulariter ∞-loba, flabellatim venosa; ramuli alii axillares primo anno gemmiformes imbricato-squamati et fasciculum foliorum primariis minorum ferunt, dein quotannis squamas imbricatas caducas infra foliorum fasciculum verticillum duplicem constantes; ramuli hi floriferi tertio v. quarto anno vix semipollicares, in uno specimine 1½-pollicares verticillos cicatricum ultra 15 ostendentes. Flores ad axillas squamarum infra folia tardius evoluta apparent. Semen abortu sæpius unicum, drupaceum, ovoideo-globosum, fere 1½-pollicare, stipite sæpius breviore.

Species 1, Chinensis, olim ex reliquiis palæogeis evidenter in hemisphærio boreali late extensa. *Parlat. in DC. Prod.* xvi. ii. 506. *Van Tiegh. in Ann. Sc. Nat. ser.* 5, x. 276. *L. C. Rich. Conif. t.* 3 *et* 3 *bis.* *Sieb. et Zucc. Fl. Jap. t.* 136. *Wats. Dendrol. Brit. t.* 168 (*Salisburia*). Florum ♀ structuram veram primum elucidavit Van Tieghem l.c., cujus observationes in speciminibus perpaucis hujus sexus in herbariis servatis confirmare potuimus.

16. **Phyllocladus,** *L. C. Rich. Conif.* 129, *t.* 3. (Thalamia, *Spreng. Anleit. Kenntn. Gew.* ii. 218.)—Flores monoici (v. dioici ?), ♂ ad apices ramorum fasciculati v. in axillis solitarii, bractea unica subtensi. Staminum columna nunc sessilis ovoidea parva, nunc stipitata longiuscule cylindracea; antheræ subsessiles, spiraliter confertæ, loculis 2 parallelis fere innatis majusculis deorsum dehiscentibus, connectivo ultra loculos in appendicem squamiformem acutam v. acuminatam producto. Amenta ♀ nunc in pedunculo solitaria ovoidea v. subglobosa pluri- v. multiflora, nunc parva, in pedunculo ∞, interrupte spicata v. subracemosa, pauciflora; squamæ simplices (e bractea sola constantes) breves, latæ, crassiusculæ, imbricatæ; interdum cum axi confertæ carnosæ; lamina ovulifera a squama libera, sub anthesin breviter v. imperfecte annularis, mox accrescens, tenuis, cupulatus, semini appressus. Ovulum 1, erectum. Strobilus sæpe carnosulus, nunc parvus 1-spermus, nunc globosus v. ovoideus ∞-spermus. Semina ovoidea, e squamis et cupula parum aucta protrusa, testa crustacea v. indurata.—Arbores fruticesve sempervirentes, ramis plerisque subverticillatis, ramulis ultimis distichis v. oppositis in phyllodia coriacea flabellatim v. pinnatim venosa irregulariter dentata v. lobata varie dilatatis. Folia vera minute squamiformia, alterna v. subspiraliter sparsa, interdum omnino abortiva. Strobili carnosi, nunc vix 2 lin. diametro, 1-2-spermi, nunc ovoideo-globosi, 6 lin. longi, seminibus sat numerosis semi-emersis.

Species 3, Tasmaniæ, Novæ Zelandiæ et ins. Borneo incolæ. *Parlat. in DC. Prod.* xvi. ii. 498. *L. C. Rich. Conif. t.* 3. *Labill. Pl. Nov. Holl.* ii. *t.* 221 (*Podocarpus*). *Hook. f. Fl. N. Zel. t.* 53. *Hook. Ic. Pl.* 549, 551, 889. *Carr. in Revue Hort.* 1867, 311, *cum ic. xyl.* *Fl. des Serres, t.* 1331.

Nomen Sprengelianum jure prioritatis gaudet, sed in opere vix noto editum, a botanicis omnibus prætervisum, nunc futile revocatur.

17. **Dacrydium,** *Soland. in Forst. Pl. Escul.* 80. (Lepidothamnus, *Philippi in Linnæa*, xxx. 730.)—Flores dioici, ♂ ad apices ramorum solitarii, inter folia ultima sessiles, sæpius parvuli. Staminum columna ovoidea v. oblonga; antheræ spiraliter confertæ, stipite brevi nunc brevissimo, loculis 2 globosis contiguis stipiti breviter adnatis deorsum liberis 2-valvibus, connectivi appendice squamiformi foliis superioribus subsimili v. parva. Flores ♀ ad axillas squamarum 1–6 summarum vix a foliis ramealibus diversarum sessiles, spicam laxam potius quam amentum formantes, sub quaque squama solitarii. Lamina ovulifera a squama libera, late concava v. cupulata, truncata, mox squamam oblique superans, latere interiore fissa. Ovulum 1, erectum v. obliquum. Squamæ sub fructu parum v. vix auctæ. Semen ovoideum, erectum, intra cupulam auctam sessile qua 2–3-plo longius; testæ stratum exterius tenuiter subcarnosum, interius indurato-crustaceum; albumen æquabile, integumento interiore tenui appresso; embryo normalis, 2-cotyledoneus.—Arbores fruticesve sempervirentes, ramosissimi. Folia parva, numerosa, spiraliter conferta, ramulos undique obtegentia, sæpius biformia, ramorum fertilium crasse squamiformia obtusa appressa arcte imbricata, plantæ junioris v. ramorum sterilium patentia angustiora sæpeque longiora, variant tamen minima v. setiformia v. in *D. Kirkii* majora, lanceolata, fere *Cunninghamiæ*. Flores ♂ 1–2 rarius 2½ lin. longi. Semen interdum vix 1 lin., rarius fere 2 lin. longum, in spica uniflora terminale erectum, in spica pluriflora cupula post anthesin sæpe lateraliter protrudit, semine juniore plus minus obliquo nunquam tamen reverso.

Species ad 10, Archipelagi et peninsulæ Malayanæ, ins. Fiji et Novæ Caledoniæ, Novæ Zelandiæ, Tasmaniæ et Chile australis incolæ. *Parlat. in DC. Prod.* xvi. ii. 494 (*excl. D. tetragono ad Microcachryn et D. taxoidi ad Podocarpum referendis*). *Lamb. Pin. t.* 41, *ed. min. t.* 69. *L. C. Rich. Conif. t.* 2. *Forbes, Pin. Wob. t.* 67. *Blume, Rumphia* iii. *t.* 172 B, *f.* 1 C. *Hook. Lond. Journ.* ii. *t.* 2, iv. *t.* 6; *Ic. Pl. t.* 544 (*Podocarpus?*), 548, 815, 1218, 1219. *Hook. f. Fl. Tasm. t.* 100 A (*excl. f.* 8, 9 *ad Microcachryn pertinentes*). *Kirk in Trans. N. Zeal. Inst.* x. 383, *t.* 18 *ad* 20. *Brongn. et Gris in Bull. Soc. Bot. Fr.* xvi. 328, *et in Nouv. Arch. Mus. Par.* iv. 5, *t.* 2 (*quoad D. araucarioidem*).

D. taxoides et *D. Pancheri*, Brongn. et Gris, nobis tam fructu quam habitu ad *Podocarpum* referenda videntur.

18? **Pherosphæra,** *Arch. in Hook. Kew Journ.* ii. 52, *pro parte*.—Flores dioici, ♂ terminales, solitarii. Staminum columna intra folia ultima subsessilis, parva, subglobosa. Antheræ spiraliter confertæ, stipite brevissimo; connectivum squamiforme, late suborbiculatum, concavum, supra loculos breviter appendiculatum nec dilatatum; loculi 2, subglobosi, introrsum adnati, subdeorsum 2-valves. Amenta ♀ parva, terminalia, ovoidea; squamæ 6–8, laxe spiraliter imbricatæ, basi concavæ, extus quasi gibbæ, specie omnino simplices. Ovulum 1, a basi squamæ erectum. Strobili parvi, ovoidei, recurvi, squamis parum auctis basi incrassatis subpatentibus. Semen ovoideo-oblongum, erectum; testa laxa, subcoriacea, membrana tenui viridi exalata v. utrinque anguste alata inclusa; membrana interna albumini appressa tenuissima. Embryo normalis.—Frutex sempervirens, erectus, dense ramosissimus. Folia parva, squamiformia, appressa, dense spiraliter imbricata, plus minus distincte 4–5-seriata nec decussatim opposita. Strobili ad 1½ lin. longi, squamis 4–8. Semina vix squamis breviora.

Species 1, montium Tasmaniæ incola. *Hook. f. Fl. Tasm.* i. 355, *t.* 99. *Parlat. in DC. Prod.* xvi. ii. 496. *Benth. Fl. Austral.* vi. 245. *Kirk in Trans. N. Zeal. Inst.* x. 378. Ovulum erectum vidimus ut in icone Hookeriana rite depictum, nec junius reversum ut ex confusione cum *Microcachryde* descriptum. De homologia squamarum amenti ♀ et integumentorum seminis incerti sumus, laminam ovuliferam haud distinguimus, an cum bractea arcte conferruminata? an sola squamam efficiens bractea abortiente? an tenuiter membranacea ovulum includens? an revera nulla? ex speciminibus siccis haud patet.

TRIBUS IV. PODOCARPEÆ.

19. **Microcachrys,** *Hook. f. in Hook. Lond. Journ.* iv. 149; *Fl. Tasm.* i. 358, *t.* 100.—Flores dioici, ♂ ad apices ramorum solitarii. Staminum columna intra folia ultima sub-

sessilia, parva, oblonga; antheræ spiraliter confertæ, stipite brevissimo; loculi 2, connectivo lato ultra loculos in appendicem breviter squamiformem incurvam producto adnati, deorsum 2-valves. Amenta ♀ parva, globosa, terminalia; squamæ pauciseriatæ, spiraliter imbricatæ, basi contractæ, dorso valde convexæ, semiglobosæ v. fere cucullatæ, specie simplices carnosæ crassiusculæ, intus concavæ (e lamina ovulifera bracteaque arcte connatis constantes ?). Ovulum 1, fere ab apice faciei interioris reversum. Strobilus parvus, subglobosus, squamis subglobosis distinctis at contiguis persistentibusque. Semina squamis obtecta, prope apicem affixa, semiglobosa, dorso convexa, facie interiore plana; testa ? duplici, externa membranacea (e lamina ovulifera formata ?), membranacea, interna (testa vera ?) crustacea; albumen carnosum; embryo normalis.—Frutex sempervirens, prostratus, ramosissimus, ramulis foliatis eleganter 4-gonis. Folia parva, squamiformia, crassiuscula, opposita, decussatim imbricata, obtuse carinata. Flores ♂ 1½ lin. longi. Strobili maturi ad 2 lin. diametro, coccinei, fere fragiformes.

Species 1, montium Tasmaniæ incola. *Benth. Fl. Austral.* vi. 240. *Hook. Ic. Pl. t.* 560 (*Arthrotaxis ?*). *Bot. Mag. t.* 5576.

In seminibus examinatis embryonem 2-cotyledoneum invenimus et in uno semine embryones 2. Nescimus qua ratione species ad *Dacrydium* refertur a Parlat. in DC. Prod. xvi. ii. 496, a quo differt squamarum amenti ♀ natura, ovulo reverso, semine, aliisque notis. De homologia squamarum incerti sumus, nec accuratius determinandum nisi in speciminibus vivis floris junioris. Ordo squamarum ♀, ab eo foliorum ramuli florentis diversus, in *Coniferis* rarius observatur.

20. **Saxegothea,** *Lindl. in Journ. Hort. Soc.* vi. 258, *cum ic. xyl.* (Squamataxus, *Senil. seu Nels. Pin.* 168.)—Flores monoici, ♂ in axillis summis subsessiles, spicam brevem formantes, singuli squamis paucis imbricatis stipati. Staminum columna cylindracea, longiuscula, densa; antheræ ∞-seriatæ, spiraliter confertæ, sessiles, 2-loculares, subdidymæ, connectivo inappendiculato, loculis parallelis adnatis subintrorsum 2-valvibus, valvis exterioribus connatis post dehiscentiam squamam reflexam acutam longitudinaliter sulcatam simulantibus. Amenta ♀ terminalia subglobosa; squamæ pauciseriatæ, apice acutæ, erectæ, lamina ovulifera adnata ultra medium crasse carnosæ, arcte confertæ. Ovulum 1, reflexum, a lamina præter basin liberum. Strobilus globosus, crasse carnosus, squamis incrassatis subconnatis, ut videtur indehiscens, bractearum apicibus conicis muricatus, intus ∞-locularis. Semina in loculis solitaria, ovoidea, irregulariter subcompressa, reversa, testa tenui exalata maturitate irregulariter fissa; embryo normalis.—Arbor sempervirens, coma densa. Folia subspiraliter sparsa, sæpe distiche patentia, linearia v. lineari-lanceolata, acuta, rigida, subtus albida. Strobili maturi vix ultra 4 lin. diametro.

Species 1, sylvarum Chile australis incola. *Parlat. in DC. Prod.* xvi. ii. 497. *C. Gay, Fl. Chil.* v 411. Icon citata Lindleyi, Veg. Kingd. 229^b, in variis diariis hortulanorum repetita, quoad antheras parum erronea est.

21. **Podocarpus,** *L'Hér.*; *H. B. et K. Nov. Gen. et Sp.* ii. 2, *t.* 97.—Flores monoici v. dioici, ♂ solitarii v. per 2–5 fasciculati, v. ∞ secus rhachin elongatam laxe spicati, singuli bracteis paucis parvis imbricatis stipati. Staminum columna cylindracea elongata densaque, v. rarius brevior et laxa, supra bracteas sessilis v. stipitata; antheræ spiraliter confertæ, sessiles, loculis 2 parallelis adnatis extrorsum v. sublateraliter 2-valvibus, connectivo supra loculos in appendicem parvam acutam rarius longius lanceolatam incurvam producto. Flores ♀ ad normam solitarii v. rarius gemini, bractea florifera inferioribusque vacuis paucis pedunculo adnatis et cum eo sic dictum *receptaculum* oblongum sæpius carnososucculentum formantibus, apicibus solis bractearum v. bracteis 1–2 intimis parvis liberis; rarius flores ∞ secus pedunculum dissito spicati bracteis parvis; lamina ovulifera e bractea florifera stipitata, ovoidea, carnosa, ovulum unicum reflexum includens, eique fere ad apicem adnata. Fructus supra receptaculum sæpius breviter stipitatus, globosus v. ovoideus, drupaceus v. nuceus, strato exteriore (e lamina ovulifera) carnosulo v. exsiccato, interiore seu seminis testa crustaceo v. indurato, undique clauso; embryo in albumine carnoso tenuis, 2-cotyledoneus, radicula deorsum spectante.—Arbores sempervirentes,

rarius frutices. Folia in diversis sectionibus diversa. Flores axillares v. subterminales. Fructus rarius semipollicem diametro excedunt.

Species enumeratæ ultra 60, plurimæ tamen spuriæ et numerus bene cognitarum infra 40 reducitur, in regionibus extratropicis hemisphærii australis utriusque orbis et in Asia tropica montana et orientali frequentes, in America tropica montana pauciores, in Europa Asia occidentali Africa boreali et America boreali desunt. *Parlat. in DC. Prod.* xvi. ii. 507. *Brongn. et Gris in Bull. Soc. Bot. Fr.* xiii. 425, xvi. 325. *Benth. Fl. Austral.* vi. 246.

Apud Eichler in Mart. Fl. Bras. iv. i. 430, lamina ovulifera seu ovarium in *Podocarpo* deest, et lamina adnata cum ovulo incluso supra descripta est ovulum anatropum, cui interpretationi assentiri nequimus.

Genus in sectiones sequentes 4 dividitur, jam a Brownio et Endlichero indicatas:—

1. *Nageia.* Folia opposita v. subopposita, plana, lata, crassiuscula, ecostata, tenuiter parallele multivenia. Inflorescentia *Eupodocarpi.* Species paucæ Asiaticæ, quarum una, sola e toto ordine *Coniferarum*, peninsulæ Indiæ orientalis incola, cum una Novo-Caledonica. *Wall. Pl. As. Rar. t.* 30. *Blume, Rumphia,* iii. *t.* 173. *Hook. Lond. Journ.* i. *t.* 23. *Bedd. Fl. Sylv. t.* 257. *Sieb. et Zucc. Fl. Jap. t.* 135. Nageia, *Gord. Pinet.* 135.

Nageia, *Gærtn. Fruct.* i. 191, *t.* 39, quoad fructum et syn. *Nagi,* Kæmpf. Amœn. Exot. 773, 874, cum ic., est *Podocarpus Nageia,* Br., sed character floris verisimiliter ob confusionem cum *Myrica rubra,* Sieb. et Zucc., ad genus longe alienum spectat. Nomen igitur Gærtnerianum, etsi antiquius, nequaquam Lheritieriano jam diu bene definito et ab omnibus fere botanicis recepto substituendum.

2. *Eupodocarpus.* Folia sparsa, undique patentia, linearia v. sublanceolata, longa v. brevia, 1-costata, avenia. Fructus solitarii v. rarius 2, receptaculo carnoso-succulento oblongo v. rarius parum incrassato. Species in utroque orbe ∞. *L. C. Rich. Conif. t.* 1 *et* 29. *Hook. Lond. Journ.* i. *t.* 19, 21, 22; *Ic. Pl. t.* 542, 582, 624. *Bot. Mag. t.* 4655; *ic. in Fl. des Serres, t.* 768, *repetita. Blume, Rumphia* iii. *t.* 170, 172. *Boer. Conif. Archip. Ind. t.* 1 *ad* 3. *Sieb. et Zucc. Fl. Jap. t.* 133, 134. *F. Muell. Fragm. Phytogr. Austral.* iv. *t.* 31. *Eichl. in Mart. Fl. Bras.* iv. i. *t.* 112 *ad* 115.

P. chilina, Rich., insignis est florum ♂ columna staminea longa tenuique. *P. alpina,* Br., *P. nivalis,* Hook., *P. ferruginea,* Don, et *P. Totara,* Don, omnes e Nova Zelandia v. e montibus Tasmaniæ et Victoriæ, distinguuntur foliis brevibus linearibus obtusis confertis patentibus recurvisve; inflorescentia *Eupodocarpi* receptaculo tamen minore. In *P. vitiensi,* Seem. Journ. Bot. i. t. 2, et Fl. Vit. t. 77, ex ins. Fiji, et *P. minore,* Parlat., e Nova Caledonia, folia disticho patentia subopposita, sed angusta; costa plus minus prominens, in *P. minore* interdum obscura, sed venæ tenues parallelæ sectionis *Nageiæ* desunt. In *P. taxifolia,* H. B. et K., e Columbia, folia distiche patentia et flores ♂ laxe spicati ut in sect. *Stachycarpo,* sed inflorescentia ♀ omnino *Eupodocarpi. Dacrydium Pancheri* et *D. taxoides,* Brongn. et Gris in Bull. Soc. Bot. Fr. xvi. 330, *et in Nouv. Arch. Mus. Par.* iv. *t.* 3, nobis videntur ad *Podocarpum* (*Eupodocarpum*) referenda.

3. *Stachycarpus.* Folia linearia, quam in *Eupodocarpo* minora, sæpe plus minus disticha. Flores utriusque sexus dissite spicati, bracteis parvis in spica ♀ non v. vix carnosis. Species 2, altera Novo-Zelandica, *P. spicata,* Br.; altera e montibus Chile australis. *Hook. Ic. Pl. t.* 543. Prumnopitys, *Philippi in Linnæa* xxx. 731, in Prodromo rite ad *Stachycarpum* relata est, sed sub nomine *P. andinæ* species plures confusæ videntur. Specimina Lechleriana n. 180, 180*a*, et 184 in herb. Kew. certe ad *Saxegothæam* pertinent. Species cæteræ in Prodromo sub *Stachycarpo* enumeratæ, floribus ♀ solitariis nec laxe spicatis ad *Eupodocarpum* referendæ sunt.

4. *Dacrycarpus.* Folia biformia, alia præsertim ramulorum fertilium parva, squamiformia, conferta, sæpiusque appressa, alia, ramulorum sterilium, distiche patentia, anguste linearia v. fere subulata. Flores ♀ et fructus *Eupodocarpi* sed parvi, receptaculo parum incrassato e bracteis 1–2. Species 4, ex Archipelago Malayano, Nova Zelandia et Nova Caledonia. *Benn. Pl. Jav. Rar. t.* 10. *Blume, Rumphia, t.* 172B, *f.* 2. *A. Rich. Fl. N. Zel. t.* 39. *P. Cumingii,* Parlat., a *P. cupressoide* nequaquam differt; *P. tenuifolia,* Parlat., videtur ramus sterilis *P. Vieillardii.*

Tribus V. Araucarieæ.

22. **Cunninghamia,** *R. Br. in Rich. Conif.* 149, *t.* 18. (Belis, *Salisb. in Trans. Linn. Soc.* viii. 315. Raxopitys, *Senil. seu Nels. Pin.* 97.)—**Flores monoici, ♂ ad apices ramorum ∞, capitati, singuli basi bractea amplexi, bracteis exterioribus ∞ vacuis pluri-**

seriatim imbricatis involucrum capituli formantibus. Staminum columna laxe cylindracea; antheræ subspiraliter multiseriatæ, stipite tenui, connectivi appendice squamiformi ovata vix v. non peltata incurva, loculis 2–4 a basi appendicis pendulis deorsum 2-valvibus. Amenta ♀ subglobosa; squamæ specie subsimplices, multiseriatæ, spiraliter imbricatæ, latissime ovatæ, mucronatæ, basi breviter contractæ, lamina ovulifera tenui arcte adnata infra medium squamæ parum incrassata, squama medium versus linea transversa minute fimbriata (laminæ margine) notata. Ovula ad basin squamarum fertilium 3, reversa, squamis nonnullis exterioribus vacuis minoribusque. Strobilus post anthesin auctus, cæterum parum mutatus, squamis laxiuscule imbricatis parum induratis margine tenuibus apice sæpe squarroso-patentibus persistentibus. Semina reversa, oblonga, testa crustacea duriuscula ala angusta cincta; embryo normalis, 2-cotyledoneus.—Arbor sempervirens, dense foliata, ramis superioribus subopposilis. Folia oblique spiraliter affixa, subdistiche patentia, lineari-lanceolata, sæpe curvula, nitida, acutissima. Capitula ♂ et amenta ♀ ad apices ramorum sæpius 2–3, primum terminalia apparent, mox tamen ramulo excrescente lateralia evadunt. Strobili fructiferi ad 1½ poll. diametro.

Species 1, Japoniæ et Chinæ incola. *Parlat. in DC. Prod.* xvi. ii. 432. *Lamb. Pin. t.* 34; *ed. min. t.* 53 (*Pinus*). *Forbes, Pin. Wob. t.* 57. *Sieb. et Zucc. Fl. Jap.* ii. *t.* 103, 104. *Bot. Mag. t.* 2743.

Amenti ♀ squamæ a pluribus revera simplius dicuntur, lamina tamen ovulifera, etsi arcte adnata, semper distinguenda est, ut bene ait Dicks. in Edinb. New Phil. Journ. ser. 2, xiii. 196, nec perfecte distincta ut errore gallice redditur in Adansonia ii. 73. Nomen Salisburyanum a Brownio et Richardio rejectum fuit ob similiter sonantem *Bellis*, Linn.

23. **Agathis**, *Salisb. in Trans. Linn. Soc.* viii. 311, *t.* 15, *non Gærtn.* (Dammara, *Lamb. Pin. ed.* 1, ii. 14, *t.* 6.)—Flores monoici v. dioici, ♂ in pedunculis axillaribus solitarii, squamis ad apicem pedunculi confertim imbricatis decussatis stipati. Staminum columna intra squamas sessilis, ovoideo-oblonga v. crasse cylindracea; antheræ numerosæ, densissime confertæ, spiraliter multiseriatæ, stipite longiusculo rigido, loculis 5–∞ ex apice stipitis extrorsum pendulis oblongis linearibusve introrsum dehiscentibus, connectivo in appendicem squamiformem sursum inflexam producto. Amenta ♀ ovoidea v. globosa; squamæ (post anthesin) specie simplices, multiseriatæ, spiraliter arcte imbricatæ, apicibus latis appressis v. breviter patentibus, lamina ovulifera squama multo breviore tenuissima arcte adnata vix nisi linea transversa medium versus squamæ conspicua. Ovula solitaria v. sub anthesi 2, uno sæpius mox abortiente (v. omnino deficiente?), reversa, squamæ appressa. Strobilus globosus, squamis latis induratis arcte appressis tardius hiantibus persistentibus. Semen sub quaque squama sæpius 1, unilaterale (altero abortivo?) v. centrale, interdum vero 2 perfecta, reversa, compressa, ovata v. oblonga, testa crassiuscula membranacea latere exteriore v. utrinque in alam latam forma varia expansa; embryo normalis, 2-cotyledoneus.—Arbores excelsæ, resinam copiosam scatentes. Rami subverticillati, gemmis novellis sæpius squamis imbricatis obtectis. Folia subopposita, ovata oblonga v. rarius lanceolata, crasse coriacea, ecostata, tenuiter striato-venulosa. Flores ♂ in pedunculo brevi ½–1-pollicares. Amenta ♀ ramulos breves terminantia. Strobili perfecti in nonnullis speciebus ultra 2 poll. diametro. Semen, si unicum, semper ad unum latus costæ centralis squamæ vidimus.

Species descriptæ 8–10, et forte plures revera distinctæ, etsi vix 4 e speciminibus bene definiendæ. Archipelagi Malayani, ins. Fiji, Novæ Caledoniæ, Novæ Zelandiæ et Australiæ orientalis tropicæ incolæ. *L. C. Rich. Conif. t.* 19. *Parlat. in DC. Prod.* xvi. ii. 374 (*Dammara*). *A. Dicks. in Trans. Soc. Bot. Edinb.* vii. 207, *t.* 5. *Lamb. Pin. ed.* i. *t.* 38 (*Pinus*); *ed. min. t.* 54, 55. *Forbes, Pinet. Wob. t.* 58, 59. *Hook. Kew Journ.* iv. *t.* 4. *Bot. Mag. t.* 5359. *Fl. des Serres* xi. *Misc.* 75, *cum. ic. Seem. Fl. Vit.* 263, *t.* 76. Icones omnes præter L. C. Rich. sub *Dammara*.

Nomen Salisburyanum, a L. C. Richard bene acceptum, jure prioritatis gaudet. *Dammara* ab auctoribus recentioribus Rumphio ascribitur, Rumphius tamen nunquam genus definivit, sed sub hoc nomine arbores tres resiniferas descripsit, quarum una est *Canarii* species, altera *Shorea*, tertia sola ad *Agathin* pertinet. *Dammara*, Gærtn., est *Bursera* species.

Flores monoicos in hoc genere negat Parlatore, sed specimina Novo-Zelandica in herb. Kew certe simul amenta ♀ et flores ♂ ferunt, ut a Lambertio delineatur.

24. **Araucaria,** *Juss. Gen. Pl.* 413. (Dombeya, *Lam. Dict.* ii. 301, *t.* 828, *non. Cav.*)—Flores dioici v. rarius monoici, ♂ terminales, solitarii, v. rarius ramulis floriferis abbreviatis ad apices ramorum fasciculati. Staminum columna longa, cylindracea, intra folia summa sessilis ; antheræ numerosissimæ, dense spiraliter confertæ, multiseriatæ, stipite rigidulo, loculis 6–8 ab apice stipitis pendulis linearibus introrsum dehiscentibus, connectivo ultra loculos in appendicem squamiformem inflexam producto. Amenta ♀ ovoidea v. globosa ; squamæ post anthesin specie simplices, multiseriatæ, spiraliter arcte imbricatæ, apicibus sæpius acutis v. acuminatis ; lamina ovulifera arcte adnata, tenuis, apice obtusa v. acuta infra apicem bracteæ breviter libera. Ovulum 1, reversum. Strobilus globosus, sæpe magnus, squamis parum incrassatis apice tamen induratis, lateribus attenuatis v. in alas dilatatis. Semen oblongum, reversum, testa cum squama arcte connata ; albumen anguste oblongum ; embryo normalis, 2–3–4-cotyledoneus.—Arbores elatæ, sempervirentes, dense foliatæ. Folia coriacea, spiraliter multiseriatim affixa, nunc squamiformia laxe imbricata ramulos undique obtegentia, nunc lanceolata, longiuscula, pungenti-acuta, patentia, in nonnullis speciebus biformia. Florum ♂ columna staminea sæpe strobiliformis pluripollicaris. Strobili usque ad 8 poll. diametro, primum terminales, demum ramulo excrescente laterales evadunt.

Species notæ 10, Americæ australis, Australiæ, Novæ Caledoniæ et insularum maris Pacifici australis incolæ. *Parlat. in DC. Prod.* xvi. ii 369. *L. C. Rich. Conif. t.* 20, 21. *Lamb. Pin. t.* 39, 40 (*Dombeya*), ii. *t.* 4, 5 ; *ed. min. t.* 56 *ad* 62. *Forbes, Pin. Wob. t.* 50 *ad* 56. *Hook. Lond. Journ.* ii. *t.* 18. *Bot. Mag. t.* 4635 ; *ic. in Fl. des Serres t.* 733, *repetita. Fl. des Serres, t.* 1577 *ad* 1580, 2221. *Sieb. Fl. Jap. t.* 138 *ad* 140. *Brongn. et Gris in Nouv. Arch. Mus. Par.* vii. 205, *t.* 13 *ad* 16. *Eichl. in Mart. Fl. Bras.* iv. i. 123, *t.* 110 *ad* 112.

Species ab auctoribus in sectiones 2 distribuuntur :—1. *Columbea*, species Americanæ, squamis non v. vix alatis, cotyledonibus 2, germinatione hypogea. Columbea, *Salisb. in Trans. Linn. Soc.* viii. 317. 2. *Eutassa*, species gerontogeæ squamis basi lateraliter alatis, cotyledonibus 4, germinatione epigea. Altingia, *Loud. Hort. Brit.* 403, *non Nor.* Eutassa, *Salisb. in Trans. Linn. Soc.* viii. 316. Eutacta, *Link in Linnæa*, xv. 543. Cotyledones tamen numero in eadem specie variare videntur ; germinatio in *A. Bidwillii* certe hypogea ; folia specierum plurimarum gerontogearum brevia obtusa et imbricata, sed in *A. Bidwilli* ex Australia et *A. Muelleri* e Nova Caledonia, lanceolata et acuta sunt fere ut in *A. brasiliensi*. Incertæ sumus an alæ squamarum sectionis *Eutassæ* ad squamam ipsam (laminam ovuliferam) v. potius ad seminis testam pertinent.

25. **Sciadopitys,** *Sieb. et Zucc. Fl. Jap.* ii. 1, *t.* 101, 102.—Flores monoici ?, ♂ ad apices ramorum ∞ dense spicati, singuli bractea subtensi, spica exinvolucrata. Staminum columna subsessilis, ovoidea v. oblonga ; antheræ dense subspiraliter confertæ, stipite brevi, loculis 2 ab apice stipitis pendulis breviterque adnatis deorsum 2-valvibus, connectivi appendice lata extus convexa subpeltata loculos obtegente. Amenta ♀ intra bracteas paucas imbricatas sessilia, subglobosa mox oblonga ; squamæ numerosæ, arcte subspiraliter imbricatæ, bractea a lamina ovulifera sub anthesi (quo statu a nobis non visa) distincta etsi multo breviore (*Sieb. et Zucc.*) in strobilo juniore alte adnata, apice late breviter acuminato recurvo, sub margine recurvo laminæ ovuliferæ fere occultata. Ovula 7–9, serie transversa affixa, reversa. Strobilus crassus, durus, ovoideo-oblongus v. breviter cylindraceus ; squamæ e lamina ovulifera aucta constantes, lignosæ, arcte imbricatæ, demum hiantes persistentesque, crassæ, late rotundatæ margine patente v. subrecurvo ; bractea squama paullo v. sub dimidio brevior eique adnata, acumine deciduo indeque subevanida præter marginem incrassatum truncatum cristam transversam in squamæ dorsam formantem. Semina reversa, compressa, ovato-elliptica, testa membranacea circumcirca in alam expansa ; embryo normalis.—Arbor excelsa, sempervirens, coma patente. Phyllodia foliis *Pini* cujusdam similia, linearia, rigida, quotannis ad apicem innovationis brevissimæ ad axillas squamarum in pseudo-verticillum evoluta, stellatim patentia, per annos plures persistentia umbracula intervallo brevi separata simulantia, demum decidua, et hinc inde (ut videtur tarde rariusque) unum alterumve phyllodiorum in ramum persistentem longiorem evolvitur. Strobilus in speciminibus nostris 3-pollicaris, fere 2 poll. diametro.

Species 1, Japonica. *Parlat. in DC. Prod.* xvi. ii. 435. *Fl. des Serres, t.* 1483, *et Diar. plur. Hortul.*; *ic. omnes e Fl. Jap. repetitæ.* De phyllodiorum natura confer *A. Dickt. in Rep. Bot. Congr. Lond.* 1866, 124, *et Carrière in Rev. Hortic.* 1868, 150, *cum ic.*

TRIBUS VI. ABIETINEÆ.

26. **Pinus,** *Linn. Gen. n.* 1077, *pro parte.*—**Flores monoici, ♂ ad apices ramorum v. basin innovationum ∞ spicati, singuli in axillis squamarum rhacheos solitarii, subsessiles squamellisque nonnullis membranaceis imbricatis stipati. Staminum columna ovoidea oblonga v. cylindracea; antheræ multiseriatæ, spiraliter confertæ, stipite brevi, loculis 2 oblongis adnatis parallelis longitudinaliter dehiscentibus, connectivo ultra loculos in appendicem incurvam squamiformem cristatam v. rarius brevem tuberculiformem producto; pollinis granulæ utroque latere lobulo globoso v. vesiculo aerifero appendiculatæ. Amenta ♀ ad apices ramorum solitaria v. pauca, sæpe recurva, squamis vacuis paucis imbricatis stipata, globosa v. ovoidea. Squamæ duplices, ∞-seriatæ, spiraliter imbricatæ, laminis a basi v. fere a basi distinctis; bractea v. lamina exterior parva, membranacea, post anthesin immutata; lamina ovulifera jam sub anthesi bractea multo major, superne dilatata v. incrassata, apice rotundata retusa v. plus minus acuminata. Ovula 2, ima basi laminæ ovuliferæ, cum ea continua arcteque reflexa, post anthesin ob basin laminæ accrescentem paullo altius inserta videntur. Strobilus ovoideus conoideus v. oblongus, bracteis immutatis marcescentibus v. evanidis; squamæ e lamina ovulifera sola compositæ, arcte imbricatæ, lignosæ, nunc apice incrassatæ vertice areolas mutua pressione quadratas formantes, nunc apice in acumen durum productæ v. apice rotundatæ attenuatæque, maturitate sæpius hiantes, diu persistentes. Semina sub quaque squama gemina, reversa, pseudosamaroidea, nempe supra insertionem membrana tenuiter scariosa hyalina a strato interiore squamæ soluta coronata et utroque latere marginata; semen verum ovoideo-compressum, ab ala sæpe demum solutum, testa crustacea nuda v. rarius apice angustissime ala vera marginata; embryo normalis, cotyledonibus sæpius 3-∞.—Arbores rarius frutices, sempervirentes. Folia dimorpha, primaria (male ab auct. plur. *perulæ* dicta) parva, squamiformia, scariosa v. hyalina, marcescentia, spiraliter ∞-seriata; secundaria conspicua, ad axillas squamellarum per 2–5 fasciculata, acicularia, longiuscula v. longissima, fasciculis (rarissime ad folium unicum reductis) basi squamis paucis hyalino-scariosis vaginatis et in integrum deciduis. Strobili sæpius sessiles, solitarii v. fasciculati, erectiusculi horizontales v. reflexi, rarissime pollicem tantum longi et interdum usque ad pedales. In paucis speciebus semen delapsum nudum est v. subnudum, membrana aliformi parva v. a squama non solvenda.**

Species ad 70, per regiones extratropicas hemisphærii borealis utriusque orbis late dispersæ, perpaucæ intra tropicos in Asia orientali, India occidentali et America centrali extensæ. *Parlat. in DC. Prod.* xvi. ii. 377 (*subgenus*).

Genus apud Linnæum *Abietineas* omnes inclusit, quem secutus est Parlatore in Prodromo, quale tamen ab auctoribus recentioribus plerisque limitatur naturalissimum est, et foliorum dispositione facillime dignoscendum, etsi characteribus floralibus carpologicisve non semper accurate definitum, ab Engelmanno nuper assidue scrutatum in sectiones 2 primarias dividitur:—

1. *Pinaster* (*Pinea*, Parlat.). Antherarum connectivum supra loculos in appendicem squamiformem incurvam productum. Strobili squamæ ante dehiscentiam arcte appresso-imbricatæ, superne crassissimæ lignosæ, areolis terminalibus (inepte *apophysibus* dictis) mutua pressione plus minus quadratis, nunc depressis subplanis, sæpius medio umbonatis v. in mucronem lignosum conicum v. elongatum (in *P. Sabiniano* affinibusque incurvum in *P. Gerardiano* recurvum) productis. Species enumerat Engelmann in litt. 56. *Engelm. Bot. Calif.* ii. 124, *ined.* *L. C. Rich. Conif. t.* 11, 12. *Nees, Gen. Fl. Germ. Monochl. n.* 6. *Reichb. Ic. Fl. Germ. t.* 521 *ad* 529. *Lamb. Pin. ed.* 1, *t.* 1 *ad* 21, *et* ii. *t.* 1, 9, 10; *ed. min. t.* 1 *ad* 29, 79, 80. *Forbes, Pin. Wob. t.* 1 *ad* 26. *Sibth. Fl. Gr. t.* 949. *Brand. For. Fl. t.* 67. *Sieb. et Zucc. Fl. Jap.* ii. *t.* 112 *ad* 114. *Lemon in Trans. Hort. Soc. ser.* 2, i. *t.* 20. *Mich. N. Amer. Sylv.* iii. *t.* 134 *ad* 144. *Nutt. N. Amer. Sylv. t.* 118. *Torr. Bot. Emory Exped. t.* 53 *ad* 58. *Newberry, Bot. Williams. Exped. t.* 4, 5.

P. monophylla, Torr. in Frem. Rep. t. 4, insignis est foliis in vagina specie solitariis teretibus;

in planta culta tamen et interdum in speciminibus sylvestribus variant alia solitaria teretia, alia gemina semiteretia.

2. *Strobus* (*Cembra*, Parlat.). Antherarum connectivum supra loculos tuberculiforme v. breviter cristatum. Strobili (interdum longi, sæpe angusti, nunc vero globosi) squamæ rigidæ duræque sed vix lignosæ et laxius imbricatæ, latæ, concavæ, suborbiculatæ, medio crassiores margine attenuatæ, umbone v. mucrone minuto terminali v. obsoleto. Species enumerat Engelmann in litt. 13, plerasque Americanas cum *P. Cembra* ex Asia et Europa. *L. C. Rich. Conif. t.* 12. *Lamb. Pin. ed.* 1, *t.* 22 *ad* 24, ii. *t.* 3; *ed. min. t.* 30 *ad* 34. *Forbes, Pin. Wob. t.* 27 *ad* 31. *Reichb. Ic. Fl. Germ. t.* 530. *Royle, Ill. Pl. Himal. t.* 84. *Sieb. et Zucc. Fl. Jap. t.* 115, 116. *Mich. N. Amer. Sylv.* iii. *t.* 145. *Nutt. N. Amer. Sylv. t.* 112, 114.

Genus præterea a pluribus auctoribus dividitur ob folia in fasciculo gemina, terna, v. 4–5-na, character non semper constans; Engelmann in litt. subsectiones 20 proponit, imprimis ad conformationem anatomicam foliorum, quam diligenter investigavit, sed character adhuc vix satis probatus, nec bene ad usum practicum idoneus.

De squamarum strobili seriebus spiralibus cfr. *Dicks. in Trans. Roy. Soc. Edinb.* xxvi. 505, *t.* 19 *ad* 22.

27. **Cedrus,** *Loud. in Forbes, Pin. Wob.* 144, *t.* 48, 49.—Flores monoici, ♂ in ramulis lateralibus abbreviatis terminales, intra folia fasciculata stellato-patentia subsessiles, bracteis squamiformibus arcte imbricatis stipati. Staminum columna intra bracteas sessilis, cylindracea; antheræ numerosissimæ, primum densissime mox laxius spiraliter confertæ, multiseriales, in axi subsessiles, loculis 2 oblongo-linearibus arcte adnatis extrorsum longitudinaliter dehiscentibus, connectivo ultra loculos in appendicem squamiformem ovatam inflexam sæpius margine denticulatam producto. Amenta ♀ subglobosa, in ramulis brevibus intra folia sessilia. Squamæ distincte duplices, spiraliter multiseriatæ, arctissime appressæ, imbricatæ, laminis fere a basi distinctis; bractea seu lamina exterior parva, arcte appressa, occlusa; lamina ovulifera jam sub anthesi bractea multo major et specie squamam constituens, apice rotundata, margine tenui. Ovula 2, prope basin laminæ ovuliferæ cum ea continua arcteque reflexa, post anthesin ob laminam basi accrescentem paullo altius affixa videntur. Strobilus subglobosus, amento florente conformis nisi valde auctus, bracteis immutatis, squamæ e lamina ovulifera valde aucta compositæ, rigidæ, parum incrassatæ, induratæ, arctissime imbricatæ, basi inflexæ, diu persistentes post semina delapsa tamen demum deciduæ. Semina (*Pini*) sub quaque squama 2, reversa, pseudo-samaroidea, membrana tenuiter scarioso-hyalina late oblique obovata a strato interiore squamæ soluta coronata et utroque latere marginata, vix demum ab ala soluta, ovato-oblonga, compressa; testa tenuiter crustacea; embryo normalis, sæpius ∞-cotyledoneus.—Arbores elatæ, sempervirentes; ramuli e gemmis imbricato-squamatis evoluti, alii tenues, folia demum dissita spiraliter affixa ferentes, alii (floriferi) crassi, breves, quotannis seriem exteriorem squamarum imbricatarum interioremque foliorum in fasciculum densum fere in verticillum confertorum ferentes. Folia acicularia, sub-4-gona, rigida, prope basin articulata, basibus infra articulationem post folia delapsa diu persistentibus. Florum ♂ columna bene evoluta 1–2-pollicaris. Strobili usque ad 3–4 poll. diametro.

Species v. varietates insignes 3, una Himalaica, altera orientalis, tertia Atlantica. *Parlat. in DC. Prod.* xvi. ii. 407 (*Pini sect.*). *L. C. Rich. Conif. t.* 14. *Lamb. Pin.* ii. *t.* 37 *bis*; *ed. min. t.* 51, 52 (*Pinus*). *Forbes, Pin. Wob. t.* 48, 49 (*Pinus*). *Hook. f. in Nat. Hist. Rev.* 1862, 11, *t.* 1 *ad* 3. Genus a *Pino* (*Strobo*) differt imprimis gemmis multifoliatis persistentibus floriferis, v. axi in ramulum foliatum excrescente; antheræ iis *Pini* (*Pinasteris*) similes.

28. **Picea,** *Link in Abhandl. Akad. Wiss. Berlin,* 1827, 179. (Abies, *Don in Loud. Arb. Brit.* iv. 2329.)—Flores monoici, ♂ ad axillas foliorum superiorum solitarii, subsessiles, bracteis squamiformibus imbricatis stipati, in ramulo perpauci v. dissiti, vix in spicam conferti. Staminum columna oblonga v. cylindracea; antheræ laxiuscule spiraliter confertæ, loculis 2 stipiti adnatis oblongo-linearibus longitudinaliter dehiscentibus, connectivo ultra loculos in appendicem squamiformem incurvam sæpe denticulatam producto. Amenta ♀ terminalia, squamis paucis vacuis imbricatis stipata, ovoidea v.

oblonga. Squamæ distincte duplices, ∞-seriatæ, spiraliter imbricatæ, laminis fere a basi distinctis; bractea membranacea parva, post anthesin vix aucta appressa; lamina ovulifera jam sub anthesi bractea major, demum squamam conspicuam formans, parum incrassata, margine tenui. Ovula 2, ima basi laminæ ovuliferæ cum ea continua arcteque reflexa, post anthesin ob laminam basi accrescentem paullo altius affixa videntur. Strobilus ovoideus v. oblongo-cylindraceus, bracteis immutatis mox occultis; squamæ e lamina ovulifera formatæ latæ, imbricatæ, post semina delapsa persistentes. Semina sub quaque squama gemina, reflexa, pseudosamaroidea, nempe supra insertionem membrana tenuiter scariosa hyalina a strato interiore squamæ soluta coronata et utroque latere marginata; semen verum ovoideo- v. oblongo-compressum, ala sæpius persistente facie exteriore squamam versus continua, seminis margine superiore interdum introrsum prominula; testa crustacea v. membranacea; embryo normalis, 3-∞-cotyledoneus.—Arbores sempervirentes. Folia acicularia, spiraliter sparsa, costa utriusque faciei prominente 4-gona v. subteretia, in petiolum brevissimum articulatum contracta, petioli basi persistente post folium delapsum in ramulo prominente. Strobili erecti v. horizontaliter patentes.

Species ad 12, regionum extratropicarum hemisphærii borealis utriusque orbis incolæ. *Parlat. in DC. Prod.* xvi. ii. 413 (*Pini sect.*). *Engelm. Bot. Calif.* ii. 121, *ined. Nees, Gen. Fl. Germ. Monochl. n.* 7. *Reichb. Ic. Fl. Germ. t.* 532. *L. C. Rich. Conif. t.* 15. *Lamb. Pin. t.* 25 *ad* 29; *ed. min. t.* 35 *ad* 39. *Forbes, Pin. Wob. t.* 32 *ad* 36. *Jaub. et Spach, Ill. Pl. Or. t.* 14. *Ledeb. Ic. Fl. Ross. t.* 499. *Wall. Pl. As Rar. t.* 246. *Sieb. et Zucc. Fl. Jap. t.* 111. *Nutt. N. Amer. Sylv. t.* 146 *ad* 148. *Newberry, Bot. Williams. Exped. t.* 9 (*nonnulli sub Abiete*).

Veitchia, *Lindl. in Gord. Pin. Suppl.* 105, videtur *Piceæ* species strobilis monstruosis.

Nomina vernacula *Abietinearum* veteribus notarum apud scriptores tam Græcos quam Romanos valde confusa fuerunt. De *Pino* quidem nullum dubium remanet quin designavit speciem unam alteramve generis *Pini* ab auctoribus recentioribus limitati (e.g. *P. halepensis, P. Pinaster, P. Laricio, P. Pinea*, etc.), et *Larix europea* nostra eadem videtur ac *Larix* Plinii. De *Abiete* et *Picea* tamen multum disputatum est. Commentatores doctiores, contra sententiam Linnæi (qui, ex Linkio Dodonæum secutus est) *Piceam* Plinii agnoscunt in *P. Abiete*, Linn., *Abietem* in *P. Picea*, Linn., sed nil certum e scriptis veteribus nobis exstantibus determinandum est. *Tæda* et *Sapinus* apud Plinium nunc partes diversas nunc status diversos ejusdem arboris nec arbores diversas designaverunt. Nomina igitur generum a *Pino*, Linn., sejunctorum sub jure prioritatis potius quam derivationis recipienda sunt. Linnæus omnes *Abietineas* sub *Pino* inclusit. Jussieu, Gen. Pl. 414, species foliis sigillatim sparsis v. dense fasciculatis sub nomine *Abietis* a *Pinis* veris foliis 2-5-nis separavit. Link primus, in commentatione supra citata, ab auctoribus plerisque sub silentio præterita, *Abietem*, Juss., in genera tria *Piceam, Abietem* et *Laricem* divisit. Don longe serius eadem genera proposuit, sed nomina Linkiana duorum priorum perperam commutavit, quem tamen secuti sunt auctores nonnulli imprimis Britannici.

29. **Tsuga,** *Carr. Conif.* 185.—Flores monoici, ♂ ad axillas foliorum superiorum solitarii, subsessiles, bracteis squamiformibus imbricatis stipati, in ramulo pauci v. dissiti. Staminum columna parva, subglobosa, intra bracteas stipitata; antheræ spiraliter confertæ, stipite brevi, loculis 2 adnatis subglobosis deorsum transverse 2-valvibus, connectivo ultra loculos in umbonem seu apiculum glanduliforme brevissime producto; pollinis granulæ (ex Engelm.) in una specie 2-lobæ, in cæteris discoideæ. Amenta ♀ terminalia, solitaria, squamis paucis vacuis stipata, globosa. Squamæ distincte duplices, laminis a basi v. fere a basi distinctis, bractea membranacea, sub anthesi conspicua; lamina ovulifera jam sub anthesi bracteæ subæqualis, demum squamam conspicuam formans. Ovula 2, ima basi laminæ ovuliferæ cum ea continua arcteque reflexa, post anthesin lamina basi accrescente paullo altius inserta videntur. Strobilus subglobosus, bracteis parum auctis suboccultis; squamæ e lamina ovulifera formatæ, laxe imbricatæ, post semina delapsa persistentes. Semina (*Pini*) sub quaque squama 2, reversa, pseudosamaroidea, membrana tenuiter scarioso-hyalina a strato interiore squamæ soluta coronata et utroque latere marginata, demum ab ala soluta, ovato-oblonga, compressa, testa crustacea; embryo normalis, 3-6-cotyledoneus.—Arbores sempervirentes, ramulis ultimis tenuibus sæpe pendulis. Folia acicularia v. anguste linearia, spiraliter sparsa

interdum distiche patentia, supra plana v. in una specie convexa, prope basin petioli brevissimi articulata, basi persistente post folium delapsum in ramulo distincte v. vix prominente. Strobili sæpius reflexi, pollicares v. breviores v. in una specie paullo longiores.

Species 5, quarum 2 Asiaticæ, 3 boreali-Americanæ. *Parlat. in DC. Prod.* xvi. ii. 427 (*Pini sect.*). *Engelm. Bot. Calif.* ii. 120. *Lamb. Pin. t.* 32; *ed. min. t.* 45 *ad* 47 (*Pinus*). *Sieb. et. Zucc. Fl. Jap. t.* 106 (*Abies*). *Wall. Pl. As. Rar. t.* 247 (*Pinus*). *Nutt. N. Amer. Sylv. t.* 116. *Newberry, Bot. Williams. Exped. t.* 7.

Genus *Piceam* cum *Abiete* arcte connectis, strobili fere prioris, flores ♂ posterioris; folia sæpius plana *Abietis* at delapsa tuberculum elevatum relinquunt fere *Piceæ*.

30. **Pseudotsuga**, *Carr. Conif. ed.* 2, 254, *et in Rev. Hortic.* 1868, 152, *cum ic.* — Flores monoici, ♂ ad axillas foliorum superiorum solitarii, subsessiles, bracteis squamiformibus imbricatis stipati, in ramulo pauci. Staminum columna subsessilis, oblongo-cylindracea; antheræ spiraliter confertæ, stipite brevi, loculis 2 adnatis subglobosis deorsum oblique 2-valvibus, connectivo ultra loculos in umbonem brevissimum producto; pollinis granulæ (ex Engelm.) ovato-subglobosæ. Amenta ♀ terminalia, solitaria, squamis paucis vacuis imbricatis stipata, ovoideo-oblonga; squamæ duplices, ∞-seriatæ, spiraliter imbricatæ, laminis a basi distinctis; bractea membranacea, sub anthesi conspicua, post anthesin parum aucta; lamina ovulifera sub anthesi multo brevior demum aucta squamam conspicuam formans, parum incrassata, apice rotundata, margine tenui. Ovula 2, ima basi laminæ ovuliferæ arcte reflexa, post anthesin lamina basi accrescente paullo altius inserta videntur. Strobilus oblongus; bracteæ conspicuæ, acute 2-lobæ, costa in acumen seu aristam squamam superantem producta; squamæ e lamina ovulifera formatæ, imbricatæ, post semina delapsa persistentes. Semina (*Pini*) sub quaque squama gemina, reflexa, pseudosamaroidea, membrana tenuiter scarioso-hyalina a strato interiore squamæ soluta coronata et utroque latere marginata, demum ab ala soluta, ovato-oblonga, compressa, testa crustacea; embryo normalis, ∞-cotyledoneus.—Arbor sempervirens, procera. Folia (*Abietis*) anguste linearia, spiraliter sparsa, subdistiche patentia, supra plana, ima basi articulata, cicatricem in ramulo haud prominentem relinquentia. Strobili reflexi, pulchri, 3–7-pollicares.

Species 1, in montibus occidentalibus Americæ borealis a Mexico usque ad Oregon extensa. *Parlat. in DC. Prod.* xvi. ii. 430 (sect. *Tsugæ* sp.). *Engelm. Bot. Calif.* ii. 119. *Forbes, Pin. Wob. t.* 45. *Nutt. N. Amer. Sylv. t.* 115 (*Abies*). *Hook. Fl. Bor. Amer. t.* 183 (*Pinus*). *Newberry, Bot. Williams. Exped. t.* 8.

Genus imprimis strobilis reflexis squamis persistentibus ab *Abiete* differt, cui forte melius pro sectione adjungendum, sententia tamen Engelmannii etiam polline aliisque characteribus essentialibus separandum.

31. **Abies**, *Juss. Gen.* 414 *pro parte*; *Link in Abhandl. Akad. Wiss. Berlin*, 1827, 181. (Picea, *Don in Loud. Arb. Brit.* iv. 2293.)—Flores monoici, ♂ ad axillas foliorum superiorum solitarii, subsessiles, bracteis squamiformibus imbricatis stipati, in ramulo perpauci v. dissiti, vix in spicam conferti. Staminum columna cylindracea oblonga v. ovoidea; antheræ spiraliter confertæ, stipite brevi, loculis 2 adnatis subglobosis deorsum oblique v. transversim 2-valvibus, connectivo ultra loculos nudo v. in umbonem brevissime producto; pollinis granulæ utroque latere lobulo globoso v. vesiculo aerifero appendiculatæ. Amenta ♀ terminalia, solitaria, squamis paucis vacuis imbricatis stipita, globosa ovoidea v. oblonga; squamæ duplices, ∞-seriatæ, spiraliter imbricatæ, laminis a basi v. fere a basi distinctis; bractea membranacea, sub anthesi conspicua, post anthesin parum aucta, lamina ovulifera brevior v. acumine solo exserto; lamina ovulifera jam sub anthesi interdum bractea major, demum squamam conspicuam formans, parum incrassata, apice rotundata margine tenui. Ovula 2, ima basi laminæ ovuliferæ cum ea continua arcteque reflexa, post anthesin lamina basi accrescente paullo altius inserta videntur. Strobilus ovoideus oblongus v. cylindraceus, bracteis parum auctis acumine tamen sæpe exserto; squamæ e lamina ovulifera formatæ, laxe imbricatæ, cum seminibus deciduæ. Semina (*Pini*) sub quaque squama gemina, reflexa, pseudosamaroidea, membrana tenuiter scariosa

hyalina a strato interiore squamæ solutæ coronata et semi-inclusa, ovoideo- v. oblongo-compressa, ala persistente facie exteriore (squamam versus) cum semine continua, margine superiore seminis introrsum ab ala prominula; testa crustacea v. membranacea; embryo normalis, 3–∞-cotyledoneus.—Arbores sempervirentes. Folia acicularia v. anguste linearia, spiraliter sparsa, interdum distiche patentia, supra plana, subtus sæpe albida, costa parum prominente, ima basi articulata, cicatricem post folium delapsum in ramulo non prominente. Strobili erecti; bracteæ quam in *Picea* majores, plus minus apice dilatatæ, integræ v. 2-lobæ, costa media sæpius in apiculum seu aristam producta.

Species ad 18, per regiones extratropicas imprimis montanas hemisphærii borealis utriusque orbis late dispersæ. *Parlat. in DC. Prod.* xvi. ii. 418 (*Pini sect.*). *Engelm. Bot. Calif.* ii. 117. *L. C. Rich. Conif. t.* 16, 17. *Lamb. Pin. t.* 30, 31; ii. *t.* 2; *ed. min. t.* 40 *ad* 44. *Forbes, Pin. Wob. t.* 37 *ad* 44. *Nees, Gen. Fl. Germ. Monochl. n.* 8. *Reichb. Ic. Fl. Germ. t.* 533. *Hook. Ic. Pl. t.* 379 (*Taxodium*?). *Bot. Mag. t.* 4740, *ic. in Fl. des Serres, t.* 899, *repetita. Boiss. Voy. Esp. t.* 167 *ad* 169. *Fl. des Serres, t.* 1437. *Ledeb. Ic. Fl. Ross. t.* 500. *Sieb. et Zucc. Fl. Jap. t.* 107 *ad* 110. *Nutt. N. Amer. Sylv.* iii. *t.* 117 *ad* 119. *Newberry, Bot. Williams. Exped. t.* 6.

KETELEERIA, *Carr. in Rev. Hortic.* 1866, 449, *cum ic.* (*Abies Fortunei*, Lindl.), est verisimiliter *Abietis* species, strobili squamis diu persistentibus.

32. **Larix,** *Mill. Dict.*; *Salisb. in Trans. Linn. Soc.* viii. 313, *excl. Cedro*.—Flores monoici, ♂ in gemmis lateralibus brevibus crassis imbricato-squamatis sæpius aphyllis solitarii. Staminum columna globosa ovoidea v. breviter oblonga, intra squamas sessilis v. longiuscule stipitata; antheræ spiraliter confertæ, stipite brevi, loculis 2 adnatis subglobosis deorsum oblique v. transversim 2-valvibus, connectivo ultra loculos nudo v. in umbonem seu apiculum glanduliforme brevissime producto. Amenta ♀ subglobosa, ad apicem gemmæ lateralis brevis sæpius foliorum fasciculo coronatæ subsessilia. Squamæ distincte duplices, multiseriatæ spiraliter imbricatæ; bractea laminæ ovuliferæ arcte applicita v. basi adnata, membranacea, sæpius acuminata, medio mucronata v. aristata, post anthesin immutata; lamina ovulifera suborbiculata, marginem versus attenuata, sub anthesi bractea brevior, post anthesin valde aucta. Ovula 2, ad basin laminæ reversa, post anthesin lamina basi accrescente paullo altius affixa videntur. Strobilus ovoideus oblongo-conicus v. subcylindraceus; squamæ e lamina ovulifera valde aucta formatæ, appressæ v. laxe imbricatæ, orbiculatæ, rigidulæ ad marginem tenues, sæpius in longitudinem striatæ, post semina delapsa persistentes, bracteis nunc emarcidis occultis nunc parum auctis persistentibus. Semina (*Pini*) sub quaque squama 2, reflexa, pseudosamaroidea, membrana tenuiter scarioso-hyalina oblonga v. oblique obovata a strato interiore squamæ soluta coronata et utroque latere marginata, ovato-oblonga, compressa, ab ala demum soluta, testa tenuiter crustacea; embryo normalis, sæpius ∞-cotyledoneus.—Arbores hiemo denudatæ, ramulis biformibus, primariis elongatis secundariis lateralibus gemmiformibus. Folia lineari-subulata, tenuia, ima basi articulata, decidua, ramulorum primariorum dissite subspiralia, in gemmis lateralibus intra squamas minimas scariosas imbricatas densissime fasciculata. Florum ♂ columna staminea 2–4 lin. longa. Strobili 1–3-pollicares.

Species ad 8, regionum temperatarum hemisphærii borealis utriusque orbis incolæ. *Parlat. in DC. Prod.* xvi. ii. 409 (*Pini sect.*). *Lamb. Pin. t.* 35 *ad* 37 (*Pinus*); *ed. min. t.* 48 *ad* 50. *L. C. Rich. Conif. t.* 13 (*Abies*). *A. Murray, Pin. Jap.* 100, *f.* 190 *ad* 200 (*Abies*). *Forbes, Pin. Wob. t.* 46, 47 (*errore* 49). *Reichb. Ic. Fl. Germ. t.* 531. *Nees, Gen. Fl. Germ. Monochl. n.* 9. *Hook. f. Ill. Him. Pl. t.* 21 (*excl. f.* 2 *ad* 4, *ad Cedrum pertinentibus*); *ic. in Fl. des Serres, t.* 1267, *repetita. Sieb. et Zucc. Fl. Jap. t.* 105 (*Abies*). *Mich. N. Amer. Sylv. t.* 153. *Nutt. N. Amer. Sylv. t.* 120.

PSEUDOLARIX, *Gord. Pin.* 292, est *L. Kæmpferi*, Carr., species Chinensis a cæteris distincta strobili squamis acuminatis cum seminibus deciduis et foliis potius *Cedri* quam *Laricis* etsi deciduis. Stirps forte *Cedro* adjungenda v. pro genere proprio habenda, flores tamen ♂ adhuc ignoti et locus incertus remanet.

Ordo CLXVI. **CYCADACEÆ.**

Endl. Gen. 70. Lindl. Veg. Kingd. 223. Miquel, Monogr. Cycad. 1842, cum tabb. 8; Prod. Cycad. 1861. Regel. Cycad. Gen. et Sp. in Act. Hort. Petrop. iv.

Flores dioici, strobilacei. *Perianthium* deest in utroque sexu. Fl. ♂: *Strobili* apicem versus trunci v. caudicis subterminales, solitarii, rarius plures, oblongi ovoidei v. cylindracei, rarissime subglobosi; squamæ crasse coriaceæ, alternatim multiseriatæ imbricatæque, v. verticaliter superpositæ et valvatim juxtapositæ, dorso loculos polliniferos gerentes. *Loculi polliniferi* sessiles v. breviter stipitati, sine ordine aggregati v. 2–4-natim interdum stellatim dispositi, oblongi obovoidei v. subglobosi, coriacei, rima longitudinali dehiscentes; pollen ellipsoideum v. subglobosum. Fl. ♀: *Strobili* quam in mare sæpius crassiores; squamæ pariter multiseriatim imbricatæ v. superpositæ, in *Cycade* valde elongatæ, margine 2-pluri-ovuliferæ, apice in laminam planam serratam pectinatam v. fimbriatam dilatatæ; in generibus cæteris fere omnibus squamæ breves plus minusve peltatæ, pelta magna sæpe inordinate incrassata, apice truncata v. varie producta, basi juxta stipitem utrinque 1-ovulifera. *Ovula* orthotropa, sessilia v. subsessilia, in *Cycade* erecto-patentia, in generibus cæteris axim strobili v. deorsum spectantia; integumentum unicum, micropylem versus in tubum brevem productum; nucleus apice tantum liber. *Semina* magna, globosa ovoidea v. oblonga, teretia v. obtuse angulata; testa extus carnosa, carne tenui aurantiaca v. rubra, intus crustacea v. ossea, basi foraminibus vasiferis percursa et strato vasculari interiore instructa. *Endospermium* crasse carnosum, superne tegumento membranaceo quasi pileatum, imo apice ad situm radiculæ spongiosum. *Embryo* in parte superiore endospermii axilis, subcylindraceus; cotyledones omnino v. basi excepta conferruminati; radicula supera, obtusa, in filum spiraliter tortum desinens; plumula squamosa, germinatione e fissura cotyledonum erumpens.

Plantæ perennes, gumma scatentes, aliæ humiles rhizomate v. caudice nudo lobato ramoso v. simplici, aliæ trunco humili v. elato donatæ; truncus indivisus v. raro furcatus v. gemmas foliaceas emittens, apice vegetans, basibus foliorum et prophyllorum persistentibus dense quasi corticatus; systema vasculare ex annulis libri et ligni medullam amplam amylaceam cingentibus, annulis anno unico non respondentibus; medulla interdum fibris lignosis instructa; radices fibrosi, fibris interdum massas coralliformes partim epigæas denique gemmiferas emittentibus. Folia biformia, prophylla et frondosa, seriebus alternis provenientia; prophylla ante frondes et strobilos evoluta, ovato- v. lineari-lanceolata v. subulata, sæpissime lanuginosa; folia normalia v. simul v. unum post alterum evoluta, exstipulata, pinnatifida pinnata v. rarissime bipinnatisecta, petiolo basi articulato, vernatione recta, rarissime inflexa; segmenta (v. pinnæ) opposita et alterna, vernatione recta et imbricativa, v. in *Cycade* circinnatim involuta et medio costata, cæterum enervia; in *Stangeria* costata et nervis transversis instructa; in generibus cæteris nervi paralleli simplices v. furcati. Strobili sessiles v. pedunculati, ♂ anthesi peracta decidui; ♀ in *Cycade* centrales, vegetatione trunci per axim ejus ulterius progredienda et squamas fructiferas amovente; in generibus aliis omnibus post anthesin decidui. Semina magna, hilo basilari v. subbasilari lato.

Species ad 75, maxima copia regiones tropicas utriusque orbis, et temperatas Africæ australis et Australiæ incolentes, una civitates australiores Americæ borealis, altera Japoniam habitantes.

Ordo inter Gymmospermeas distinctissimus, quoad organa sexualia insigniter homomorphus, *Coniferis* magis quam *Gnetaceis* affinis, ab utroque tamen ordine tam habitu quam characteribus floralibus abunde diversus.

CONSPECTUS GENERUM.

Tribus I. Cycadeæ. Strobilus ♀ terminalis, post anthesin proliferus; squamæ elongatæ, marginibus 2-pluri-ovulatis. Ovula erecto-patentia. Truncus cylindraceus, basibus persistentibus

petiolorum et prophyllorum obtectus. Foliorum segmenta vernatione circinnatim involuta, 1-costata, enervia.

1. CYCAS.—*Reg. trop. et subtrop. orbis veteris.*

Tribus II. Encephalarteæ. Strobilus ♀ post anthesin deciduus; squamæ peltatæ, pelta utrinque juxta stipitem 1-ovulata. Ovula axim strobili spectantia. Foliorum segmenta vernatione recta, imbricativa.

Subtribus 1. Euencephalarteæ. *Strobili squamæ seriebus alternantibus imbricatæ. Truncus ovoideus v. cylindraceus, basibus prophyllorum et petiolorum persistentibus obtectus. Foliorum segmenta nervis parallelis longitudinalibus.*

2. DIOON. Strobili squamæ laxæ, breviter stipitatæ, pelta plana erecta ovato-cordata. Ovula processu hamato basi peltæ utrinque inserta. Folia rigida, pinnatifida, segmentis planis pungentibus.—*Mexico.*

3. MACROZAMIA. Strobili ♀ squamæ peltatæ, pelta incrassata ascendente sæpissime in laminam erectam acuminatam producta. Folia pinnata.—*Australia.*

4. ENCEPHALARTOS. Strobili ♀ squamæ peltatæ, pelta incrassata truncata apice decurva. Folia pinnata.—*Afric. trop. et austr.*

Subtribus 2. Stangerieæ. *Strobili squamæ seriebus alternantibus imbricatæ. Rhizoma v. caudex napiformis, nudus. Foliorum segmenta costata et nervosa, nervis utrinque costæ horizontalibus creberrimis simplicibus v. furcatis.*

5. STANGERIA. *Afric. aust. orient. subtrop.*

Subtribus 3. Zamieæ. *Strobili squamæ seriebus verticalibus superpositæ, peltis hexagonis valvatim juxtapositis. Foliorum segmenta ecostata nervis parallelis.*

6. BOWENIA. Squamarum ♂ et ♀ pelta truncata apice planiuscula. Caudex nudus, hypogæus. Folia bipinnatisecta.—*Austral. trop.*

7. CERATOZAMIA. Squamarum ♂ et ♀ pelta apice transverse 2-cornuta. Folia pinnata.—*Mexico, Nov. Grenad., Brasil. occident.*

8. MICROCYCAS. Squamæ ♂ planiusculæ, ♀ peltatæ, pelta magna velutino-tomentosa. Truncus cylindraceus, basibus petiolorum et perularum obtectus. Folia pinnata.—*Cuba.*

9. ZAMIA. Squamarum ♂ et ♀ pelta truncata, apice nuda. Caudex nudus epigæus v. partim hypogæus. Folia pinnata.—*Amer. trop., et bor. subtrop.*

TRIBUS I. CYCADEÆ.

1. Cycas, *Linn. Hort. Cliff.* 482; *Gen. n.* 1122.—Fl. ♂: Strobilus pedunculatus, oblongus ovoideus v. subglobosus; squamæ numerosissimæ, multiseriatim imbricatæ, cuneatæ, apice sterili plus minusve dilatata et in mucronem brevem v. elongatum ascendentem producta, subtus loculis polliniferis segregatis v. 2-4-natim aggregatis operta. Fl. ♀: Strobilus sessilis, globosus v. late ovoideus, dense lanatus; squamæ laxe imbricatæ, ascendentes, lineari-elongatæ, apice in laminam ovatam v. orbicularem integram serratam pectinatam v. fimbriatam dilatatæ. Ovula crenis marginalibus squamæ infra apicem dilatatum utrinque 2-plura, rarissime solitaria, sessilia, suberecta, globosa v. late ovoidea. Semina late ellipsoidea v. globosa.—Arbores trunco cylindraceo interdum elato, simplici v. dichotome ramoso, basibus prophyllorum et petiolorum persistentibus induratis obtecto. Folia subverticillata, simul provenientia, prophyllis elongato-subulatis immixta, patentia, petiolata, glabra v. parce furfuracea, lineari-oblonga, pinnata, pinnis lineari-elongatis 1-nerviis, integerrimis, infimis interdum ad spinas reductis, nervis lateralibus nullis, vernatione circinnatim involutis. Strobili ♂ in gemma laterales, ♀ terminales in centro vegetantes.

Species ad 15, inter tropicos Asiæ, Africæ, Australiæ et Polynesiæ obviæ. *A. DC. Prod.* xvi. ii. 525. *Regel in Act. Hort. Petrop.* iv. 279. *Benth. Fl. Austral.* vi. 249. *F. Muell. Fragm. Phyt. Austral.* viii. 169, x. 63, 121. *Miq. Nieuwe Bijdr. tot. Kenn. Cycad. t.* 1, 2; *Monogr. Cycad. t.* 1, 2, 3; *Analect. Ind. t.* 5, *et in Linnæa* xviii. *t.* 4, 5, 6, xix. *t.* 1. *L. C. Rich. Mem. Conif. et Cycad. t.* 24 *ad* 26. *Smith in Trans. Linn. Soc.* vi. *t.* 29, 30. *Thou. Hist. Veg. Iles. Afr. t.* 1, 2. *Oudem. in*

Archiv. Neerland. ii. *t.* 1, 2, 3. *Blume, Rumph. t.* 176ᵇ, 176ᶜ. *Griff. Ic. Pl. As. t.* 360 *ad* 362, 377, 378 (ubi, anno 1854, pollen in cavo apicali nuclei ovuli receptum primum depictum). *Bot. Mag. t.* 2826, 2827, 2963, 2964. *Lemaire, Ill. Hortic.* 1864, *t.* 405 *bis. Fl. des Serres, t.* 2118, 2119. *Fl. Jardin.* v. *t.* 129. *Rheede, Hort. Malab.* iii. *t.* 13 *ad* 21 (*Todda Panna*). *Rumph. Herb. Amboin. t.* 20 *ad* 24 (*Arbor Catappoides*).

TRIBUS II. ENCEPHALARTEÆ.

2. **Dioon,** *Lindl. Bot. Reg.* 1843, *Misc.* 59 (Dion). (Platyzamia, *Zucc. in. Abhandl. Bayer. Akad.* iv. 23, *t.* 4.)—Fl. ♂: Strobilus cylindraceus; squamæ numerosæ, multiseriatim imbricatæ, elongato-cuneatæ, apice dilatato incurvo late triangulari obtuso lanuginoso, subtus loculis polliniferis sessilibus oblongis opertæ. Fl. ♀: Strobilus ovoideus; squamæ imbricatæ, subpeltatim stipitatæ, stipite gracili; lamina magna, ovata, subacuta, dense lanuginosa, deorsum breviter in auriculam semicircularem concavam producta, basi utrinque juxta stipitem geniculatim inflexa et ibidem uni-ovulifera. Ovula ovoidea, processibus rotundatis baseos inflexi laminæ inserta, subhorizontalia, axin strobili spectantia. Semina magna.—Truncus brevis, primum ovoideus, demum crassus, cylindraceus, prophyllis lanatis persistentibus dense obtectus. Folia simul verticillatim provenientia, numerosa, erecto-patentia, breviter petiolata, elongato-lanceolata, rigida, plana, profunde pinnatifida, juniora pilosa, segmentis angustis approximatis strictis planis pungenti-acuminatis tenuiter striato-nervosis ecostatis interdum dentatis, infimis in spinas petiolum marginantes desinentibus, vernatione stricta. Strobili magni, subsessiles, basi prophyllis lanceolatis lanuginosis stipati.

Species 2, Mexicanæ. *A. DC. Prod.* xvi. ii. 537. *Regel in Act. Hort. Petrop.* iv. 296. *Miq. in Verhandl. Ned. Inst.* 1851, *t.* 3, 4. *Lemaire, Ill. Hort.* ii. 91. *Bot. Mag. t.* 6184.

3. **Macrozamia,** *Miq. Monogr. Cycad.* 36, *t.* 4, 5; *et in Linnæa* xvii. *t.* 2; xix. *t.* 2, 3. Fl. ♂: Strobilus ovoideus oblongus v. cylindraceus; squamæ multiseriatim imbricatæ, breves v. elongatæ, apice dilatato medio acutato v. in spinam incurvam v. erectam producto, subtus loculis polliniferis globosis breviter stipitatis onustæ. Fl. ♀: Strobilus ovoideus v. subglobosus; squamæ imbricatæ, peltatæ; pelta crassa, lata, transverse oblonga, vertice ascendente obtuso acuto v. in spinam ascendentem producto, basi utrinque 1-ovulifera. Ovula sessilia, subglobosa, axin strobili spectantia. Semina ordinis, sæpe magna.—Truncus erectus, ovoideus v. cylindraceus, prophyllis basibusque petiolorum persistentibus obtectus. Folia pinnata, foliolis angustis integerrimis v. apices versus paucidentatis, nervis longitudinalibus parallelis, basi sæpe calloso-incrassatis, vernatione stricta imbricativa. Strobili magni.

Species ad 7, Australiæ tropicæ et temperatæ incolæ. *Benth. Fl. Austral.* vi. 250. Genus in sectiones 2 commode dividitur:—

1. *Eumacrozamia.* Folia deinceps evoluta. Prophylla demum fibroso-lacera. Truncus sæpius ovoideus. *Miq. Monogr. Cycad. t.* 4, 5 *et* 6 (*Encephalartos*), *et in Linnæa* xix. *t.* 2, 3. *Heinzel in Nov. Act. Nat. Cur.* xxi. i. *t.* 10 *ad* 13. *Hook. f. Bot. Mag. t.* 5943. MACROZAMIA, *Regel in Act. Hort. Petrop.* iv. 317. *A. DC. Prod.* xvi. ii. 534, *excl.* § 2.

2. *Lepidozamia.* Folia simul evoluta. Prophylla nunquam fibroso-lacera. Truncus cylindraceus. LEPIDOZAMIA, *Regel in Bull. Soc. Imp. Nat. Mosc.* 1871, i. 182, *t.* 4, *f.* 20, 21; *Gartenfl.* 1857, *t.* 186, *f.* 23 *et* 31, 1870, *t.* 660; *et in Act. Hort. Petrop.* iv. 294. *A. DC. Prod.* xvi. ii. 547. CATAKIDOZAMIA, *T. Hill in Gard. Chron.* 1865, 1107.

4. **Encephalartos,** *Lehm. Pugill.* vi. 9, *t.* 1 *ad* 5. (Arthrozamia, *Reichenb. Conspect.* 40, *nomen tantum*; *Handb. Nat. Pfl. Syst.* 69, *ex Vriese in Ann. Sc. Nat. ser.* 2, x. 153.) — Fl. ♂: Strobilus oblongus ovoideus v. cylindraceus; squamæ multiseriatim imbricatæ, lato- v. elongato-cuneatæ, crassæ, sæpe rugosæ, apice sterili angustato prismatico-truncato plus minusve decurvo, subtus loculis polliniferis ovoideis opertæ. Fl. ♀: Strobilus crassus, ellipsoideus v. oblongus; squamæ numerosæ, multiseriatim imbricatæ, peltatæ, stipite gracili, pelta reniformi crasso basi utrinque in sinu ovulifero, vertice lato subtriangulari v. prismatico v. convexo lanuginoso. Ovula sessilia,

ovoidea, deorsum spectantia. Semina ellipsoidea v. oblonga, endocarpio e segmentis pluribus demum coalitis formato (ex A. DC.).—Arbores trunco cylindraceo v. medio tumido crasso, prophyllis basibusque petiolorum persistentibus dense obtecto. Folia simul subverticillatim provenientia, numerosa, patenti-recurva, petiolata, lineari-oblonga, glabra v. villosa, viridia v. (interdum insigniter) glauca, pinnata, foliolis rigidis multijugis sessilibus integris spinosis v. spinuloso-dentatis crasse coriaceis lineato-nervosis, vernatione rectis, infimis sæpe spinescentibus, petiolo basi exauriculato. Strobili magni, ♂ interdum 2–3-ni. Folia in *E. brachyphyllo* uno post alterum provenientia vidimus, foliolis basi semi-tortis.

Species ad 12, Africæ tropicæ et australis incolæ. *A. DC. Prod.* xvi. ii. 530. *Regel in Act. Hort. Petrop.* iv. 285; *Gartenfl. t.* 477, 822. *Gartn. Fruct. t.* 3 (*Zamia*). *Miq. Monogr. Cycad. t.* 2, 6; *Comm. Phyt. t.* 13, *et in Linnæa* xix. *t.* 4, 5. *De Vriese, Nov. Sp. Cycad. t.* 3, 4, 5, *et Descr. Pl. Nov. cum tabb.* 2. *Lehm. et De Vriese in Tijdschr. Nat. Gesch.* ii. *t.* 9; iv. *t.* 3 *ad* 7, 9, 10; vi. *t.* 3, 4. *Jacq. Fragm. t.* 25 *ad* 31 (*Zamia*). *Bot. Mag. t.* 4903, 5371. *Lemaire, Ill. Hortic. t.* 557.

5. **Stangeria**, *T. Moore in Hook. Lond. Journ.* v. 228.—Fl. ♂: Strobilus cylindraceus; squamæ multiseriatim densc imbricatæ, obovato- v. cuneato-quadratæ, trapezoideæ, obtusæ, angulis obtusis, subtus loculis polliniferis stipitatis obovoideo-oblongis opertæ; pollen late ellipsoideum. Fl. ♀: Strobilus brevior, oblongo-cylindraceus; squamæ dense multiseriatim imbricatæ, vix stipitatæ, ovato-rotundatæ, ascendentes, ima basi utroque latere excavatæ, et ovulum unicum fossa gerentes. Ovula subglobosa, deorsum spectantia. Semina globosa, pro ordine parva.—Truncus v. caudex podalis, fere subterraneus, subcylindraceus napiformis v. deformis, nudus, glaber, lenticellis sparsis exceptis lævis, 1-oligo-cephalus. Folia pauca, longe petiolata, pinnata, glaberrima, vernatione inflexa; pinnæ oppositæ et alternæ, lineari-lanceolatæ, obtusæ acutæ v. acuminatæ, spinuloso-serrulatæ v. subcrenatæ, rarius pinnatifido-lobatæ, inferiores petiolulatæ interdum ad basin 2-fidæ, superiores sessiles basi lata margine inferiore decurrente, vernatione rectæ; costa valida, nervis horizontalibus creberrimis parallelis simplicibus v. basi v. altius furcatis. Strobili pedunculati, villosi, pedunculo basi prophyllis 2–3-seriatis imbricatis orbiculatis concavis tomentosis cincti.

Species 1 v. 2, Africæ subtropicæ austro-orientalis incolæ. *A. DC. Prod.* xvi. ii. 530. *Bot. Mag. t.* 5121. *Regel, Gartenfl. t.* 798, *et in Act. Hort. Petrop.* iv. 284.

6. **Bowenia**, *Hook. Bot. Mag. t.* 5398 *et* 6008.—Fl. ♂: Strobilus ovoideo-oblongus, parvus; squamæ multiseriatim superpositæ, cuneato-rotundatæ, apicibus truncatis transverse oblongo-hexagonis valvatim juxtapositis, subtus basin versus loculis polliniferis globosis sessilibus opertæ. Fl. ♀: Strobilus masculo multo major et crassior; squamæ pauciseriatim superpositæ, valvatim juxtapositæ, peltatæ, stipite brevi cuneiformi; pelta transverse oblonga, basi utrinque stipitis 1-ovulifera, vertice crasso transverse hexagono, medio depresso margine areolæ depressæ crenulato. Ovula ovoidea, axin strobili spectantia. Semina parva, globosa.—Caudex humilis, deformis, simplex lobatus v. subramosus, nudus, ramis lobisve foliiferis, pro maxima parte hypogæus. Folia pauca, longe gracile petiolata, seriatim provenientia, ampla, ambitu orbicularia, 2-pinnatisecta, pinnis primariis paucis stipitatis inferioribus subverticillatis, pinnulis oblique ovato- v. falcato-lanceolatis v. rhombeis acuminatis striato-nervosis integerrimis v. spinuloso-serratis nitidis, vernatione stricta. Strobili glabri, basi prophyllis paucis brevibus rotundatis concavis coriaceis cincti, ♂ pedunculati, ♀ sessiles. Semina magnitudine nucis avellanæ.

Species 1 v. 2, Australiæ boreali-orientalis incolæ. *A. DC. Prod.* xvi. ii. 534. *Benth. Fl. Austral.* vi. 254.

7. **Ceratozamia**, *Brongn. in Ann. Sc. Nat. ser.* 3, v. 7, *t.* 1, *partim*. (Dipsacozamia, *Lehm. in Lindl. Veg. Kingd.* 225, *nomen tantum*.)—Fl. ♂: Strobilus oblongo-cylindraceus; squamæ multiseriatim superpositæ, valvatim juxtapositæ, breviter stipitatæ, obovato- v. quadrato-cuneatæ, vertice sterili complanato angustato in cornua 2 lateralia pungentia desinente, subtus loculis polliniferis late ellipsoideis sessilibus dense obtectæ. Fl. ♀: Strobilus

masculo multo major et crassior, squamæ multiseriatim superpositæ, peltatæ, stipite crasso; pelta magna, complanata, subquadrata, marginibus rotundatis, vertice transverse hexagono medio in carinam transversam 2-cornutam contracto, cornubus lateralibus pungentibus· Ovula ad basin peltæ utrinque stipitis solitaria, sessilia, intus spectantia. Semina majus cula, ovoidea.—Truncus erectus, cylindraceus, simplex v. basi furcatus v. proliferus, basibus petiolorum et prophyllorum persistentibus obtectus. Folia simul provenientia, subverticillata, longe petiolata, pinnata, petiolo basi subvaginante, rhachi elongata, foliolis elongatis basi lata sessilibus lineari-lanceolatis integerrimis v. apices versus denticulatis, parallele multinerviis, vernatione imbricativa stricta. Strobili glabri.

Species enumeratæ 6, Mexicanæ. *A. DC. Prod.* xvi. ii. 546. *Regel in Act. Hort. Petrop.* iv. 297.

8. **Microcycas,** *Miq. in Fl. des Serres,* vii. 141. (Zamiæ, *sect.*) — Fl. ♂: Strobilus cylindraceus; squamæ multiseriatim laxe superpositæ, cuneiformes, dimidio inferiore subtus loculis magnis polliniferis operto, superiore sterili latiore semicirculari crasso obtuso dense velutino-tomentoso. Fl. ♀: Strobilus masculo longior et crassior; squamæ subvalvatim juxtapositæ, peltatæ, stipite brevi crasso; pelta magna, elongata, globoso-ovoidea, obtusa v. apice truncata, velutino-tomentosa. Ovula utrinque stipitis ad basin peltæ solitaria, sessilia, axin strobili spectantia. Semina . . .—Truncus humilis, gracilis, cylindraceus, basibus prophyllorum et petiolorum persistentibus obtectus. Folia simul subverticillatim provenientia, patentia, petiolata, pinnata, petiolo inermi, foliolis anguste lineari-ensiformibus curvis basi lata articulata sessilibus obtuse acuminatis striato-nervosis, marginibus integerrimis tenuiter recurvis, vernatione recta. Strobili pedunculati, pedunculo basi prophyllis elongatis subulato-lanceolatis molliter lanuginosis cincto.

Species 1, Cubensis. *A. DC. Prod.* xvi. ii. 538. *Regel in Act. Hort. Petrop.* iv. 303.

9. **Zamia,** *Linn. Gen. n.* 1227.—Fl. ♂: Strobilus oblongo-cylindraceus; squamæ multiseriatim superpositæ, valvatim juxtapositæ, peltatæ, stipite crasso; pelta valde incrassata, transverse hexagona v. oblique heptagona, vertice truncata, subtus in latere inferiore et secus stipitem loculos polliniferos sessiles gerentes. Fl. ♀: Strobilus masculo consimilis, sed major et crassior, pelta basi utrinque 1-ovulata. Ovula sessilia, ovoidea.—Caudex, interdum truncus humilis, simplex lobatus v. ramosus, lævis v. cicatricatus, nudus epigæus v. fere hypogæus. Folia pauca, unum post alterum provenientia, pinnata, petiolo lævi v. spinuloso, pinnis latis v. angustis basi lata articulata insertis integerrimis v. serratis parallele nervosis, vernatione stricta; prophylla sæpius dentata. Strobili pro ordine inter minores, glabri v. rarius furfuracei, solitarii v. 2-∞-ni.

Species enumeratæ ad 30, Americæ tropicæ et subtropicæ borealis incolæ. *A. DC. Prod.* xvi. ii. 538. *L. C. Rich. Mem. Conif. et Cycad. t.* 27, 28. *Eichl. in Mart. Fl. Bras.* iv. i. *t.* 109. *Wedd. in Ann. Sc. Nat. ser.* 3, v. *t.* 4; *ic. in Mart. Fl. Bras. t.* 108, *iterata. Miq. Monogr. Cycad. t.* 7, 8; *Cycad. Amer. t.* 1, 2. *Seem. Bot. Her. t.* 43. *Jacq. Hort. Schœnbr. t.* 397, 398. *Ic. Rar. t.* 635, 636. *Bot. Mag. t.* 1741, 1838, 1851, 1969, 2006, 5242. *Lemaire, Ill. Hortic. t.* 133, 134, 195.

Genus a Regelio in Act. Hort. Petrop. iv. in 2 divisum: 1. Zamia, *Regel. l.c.* 304, et Aulacophyllum, *Regel, Gartenfl.* 1876, 141, *et in Act. Hort. Petrop.* iv. 300, nullo modo diversum nisi 'foliolis nervis immersis,' character diagnosticus nobis effugit.

ADDENDA ET CORRIGENDA.

Pag.

35, *lin.* 5, *post* Hook. f. *adde*: ex Africa australi.

99, *ad calcem generis* Polygoni *adde*:
In *P. Weyrichii*, F. Schmidt, nux perianthio 3-4-plo longior, angulis alatis, sed embryo *Polygoni* nec *Fagopyri*.

134 CHLORANTHUS; sect. 2 *Tricercandra*, *lin.* 1, *loco* Andrœcium 2-lobum, *lege*: Andrœcium 3-lobum.

283 BACCAUREA, *ad calcem*, *adde*:
COCCOMELIA, *Reinw. in Syll. Pl. Soc. Ratisb.* ii. 5, e Java, genus ab auctoribus recentioribus prætermissum, est ex charactere dato *Baccaureæ* species.

295 *lin.* 15, *adde*: COMATOCROTON, *Karst. in Koch, Wochenschr.* 1859, 6, species Columbiana ab auctore a *Barhamia* distinguitur imprimis petalorum in fl. ♀ absentia, quod tamen in speciebus perplurimis *Crotonis* observatur.

299 *lin.* 1, synonymis sectionis *Tylogyne adde*: ENCHIDIUM, *Jack in Mal. Misc.* ii. vii. 89.

336 SEBASTIANIA; sect. 2, *Microstachys*, *adde ad calcem*: TRAGIOPSIS, *Karst. in Koch, Wochenschr.* 1859, 5, species Columbiana, ex charactere dato verisimiliter ad hanc sectionem *Sebastianiæ* pertinet.

INDEX GENERUM ET SYNONYMORUM.

LONDINI
EXCUDERUNT SPOTTISWOODE ET SOC.
NEW-STREET SQUARE.